Volume 166 No. 21

Oil, Paint and Drug Reporter

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Oil, Paint and Drug Reporter

Volume 166 No. 21 — 30 Church Street, New York 7, N. Y. — November 22, 1954

Drug Label Uniformity Aim of New FDA Action

Steps were taken last week by the federal Food and Drug Administration to provide more uniformity in the labeling of drugs. The action took the form of a new regulation establishing procedures for removing the Rx legend from the labeling of a drug when no longer applicable so as to avoid situations in which the same drug is labeled by one manufacturer for over-the-counter sale, and another for prescription only.

The new regulation was established under section 503 (b) (3) of the federal food, drug and cosmetic act (Durham-Humphrey amendment) which requires such labeling changes to be affected by regulation. Removal of the prescription limitation is authorized when it is not necessary to protect public health.

The federal food, drug and cosmetic act requires the safety of all new drugs to be established before they may be shipped interstate. The manufacturer submits to the Food and Drug Administration scientific data demonstrating the safety of the drug when used according to the proposed labeling.

Prescription Sale Limits

Usually a new drug is limited to prescription sale by the terms of the new-drug application at the time it is first marketed. Experience and additional studies may later establish its safety for lay use under appropriate directions without prescription. Under such circumstances the labeling is required by law to bear adequate directions for over-the-counter sale and use.

Under the new regulation manufacturers will continue to initiate these changes in drug labeling by submitting or supplementing new-drug applications. The new regulation provides for publication in the *Federal Register* of each change in the status of a drug from prescription only to over-the-counter labeling. Orders changing the status of drugs may be issued in final form or in the form of pro-

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Chrome Ore to US, Grains To Turkey in Barter Pact

The United States and Turkey have signed an agreement for the movement of $35,500,000 of wheat and feed grains to Turkey, part of which is to be paid for with chrome ore. The transaction involves about 300,000 metric tons of wheat and 200,000 metric tons of feed grains.

In announcing the agreement, the Department of Agriculture stated that it is proposed to barter about 100,000 tons of wheat for Turkish chrome ore, which will be used within the United States stockpiling program. This barter is to be carried out through private US trade channels. This is the first formal agreement to be signed with a foreign government in furtherance of the agricultural trade development and assistance act passed by congress earlier this year.

Rubber Plants Seen Sold By Next Month's Deadline

Prospects that the Rubber Producing Facilities Disposal Commission will complete a program for selling the government's synthetic rubber plants to private industry in time to meet next month's deadline, set by congress, were viewed with optimism by Hollman D. Pettibone, chairman, in an address November 18 before the Rubber Manufacturers' Association in New York.

The rubber plant disposal law requires the commission to submit a plan of disposal to congress for approval by December 27. The plan must provide for the continued production of at least 500,000 long tons of GR-S rubber and 43,000 long tons to butyl rubber annually. The sales pattern must not permit any person to possess unreasonable control over the manufacture of synthetic rubber or its component materials and full and fair value must be received for the plants. Congress has sixty days in which to veto the sales program after its submission.

Although no final contracts have been negotiated as of the present time, Mr. Pettibone said that "the commission remains optimistic that a program can be recommended to congress." A final definitive sales contract is now in course of preparation with every bidder whose bid is regarded by the commission as representing full, fair value, he said, and the commission proposes to execute these contracts as soon as there is in the making a program that can be recommended to congress.

He said that it is not expected that all the facilities will be sold and those not sold or leased will be put in standby for three years so as not to compete with buyers of other facilities.

Phosphate Lease Rules Altered on Fringe Acres

The Bureau of Land Management last week amended its regulations relating to the leasing of public land for phosphate development to permit the leasing of fringe acreage to adjoining lease holders on a non-competitive basis under certain conditions. The amendment is contained in circular 1889.

Two limitations apply in leasing the fringe acreage on a non-competitive basis:—(1) The fringe acreage is not of interest to more than one operator and lacks sufficient reserves of phosphate deposits to warrant independent development; (2) The additional acreage would be within the aggregate limitation of 2,560 acres which applies to a single phosphate land lease.

If the fringe acreage has sufficient phosphate reserves to warrant independent development, or if there appears to be competitive interest in the acreage, the lands are to be awarded only on a competitive bid basis.

US Reveals Coal Chemicals in Line For Tariff Cuts Via Japanese Pact

A long list of coaltar products and other items on the chemical schedule of the tariff act of 1930, as well as many products closely allied with the chemical industry, have been proposed for duty reduction by the government in the forthcoming negotiation of a trade agreement with Japan.

Formal announcement of intentions to negotiate the agreement was made by the State department November 14. At the same time, the department made public a list of the products that may be involved, numbering several thousand. The Committee for Reciprocity Information will hold public hearings on the products beginning December 13 and the Tariff Commission will hold hearings simultaneously on the so-called "peril points."

Negotiation of the proposed agreement is to take place in February at Geneva, Switzerland, at a conference of the countries associated in the General Agreement on Tariffs and Trade. The contracting parties to GATT presently are conferring in Geneva on substantive changes in the general agreement, and the proposal that Japan be permitted to become a full-fledged member.

Seen As Major Step

The proposed trade agreement with Japan, while it will not be as broad in scope as the general agreements negotiated at Torquay, Annecy and Geneva, is expected to be a major step in the trend towards reductions in world tariff rates. Under the most-favored-nation principle, all concessions granted to Japan in the agreement will be available to other GATT parties, and any concessions they might negotiate with Japan will likewise be extended to the United States.

That the government considers the Japanese agreement of significant importance was emphasized in the State department's announcement. The department noted that the "President has given high priority to expansion of Japan's trading opportunities because of Japan's vital importance to free-world mutual security." The department also added:—

"The majority of the listed articles are included for the purpose of giving consideration to concessions in negotiations directly between the United States and Japan. There are, however, many articles which are of primary interest to other countries. For these articles, consideration will be given to possible concessions under circumstances where these other countries are also negotiating with Japan under the General Agreement and where a concession by the United States would broaden the over-all results of the multilateral negotiations through the triangular exchange of benefits."

Testimony to Be Permitted

At the hearings before the Committee for Reciprocity Information, persons will be allowed to testify with reference to any article listed for possible tariff reduction, either to protest the reducing of duties or to favor them. They also may ask that other articles be included on the list. Those persons who plan to testify orally are required to notify the committee by December 3 and file a copy of their statement by December 6. Those who wish

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Humble Gets 1st Contract To Work Louisiana Shelf

Secretary of the Interior Douglas McKay has announced that Humble Oil & Refining Company, Houston, Tex., is the first of seventeen high bidders for oil and gas leases on eighty-three federal land tracts off the coast of Louisiana to receive a fully-executed contract for oil exploration under the continental shelf act of 1953.

Secretary McKay announced that Humble's additional check for $75,720 together with properly signed lease forms for tract 58 have been received and a contract executed by the department entitling the company to a minimum five-year lease. The federal government, in addition to the company's successful bonus bid, will continue to receive minimum royalties from any oil and gas produced by the company during the period of the lease at the rate of one-sixth plus a minimum rental of $3 per acre.

Completed lease forms are also beginning to come in, together with the remainders of high bonus bids, from the other sixteen companies which submitted successful bids totaling $116,378,476 for oil and gas exploration rights on October 13. In addition, completed lease forms are expected on five sulfur tracts in Louisiana's outer continental shelf for which Shell Oil Company offered $1,233,500.

Following is the list of high oil and gas lease bidders and the total amounts bid:—Gulf Refining Company, $37,239,500; Shell

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Gum Rosin Is Offered By Dep't of Agriculture

Gum rosin acquired by the Commodity Credit Corporation under gum naval stores loan operations prior to the 1954 program was offered for sale beginning November 15 by the Department of Agriculture. Sales are governed by the terms and conditions of announcement TB-21 and by supplementary announcements made from time to time, not more often than weekly, stating prices and listing stocks at each storage location.

Sales will be made through the American Turpentine Farmers Association Cooperative, Valdosta, Ga., on a telegraphic offer-and-acceptance "first come, first served" basis. Rosin prices will be announced per 100 pounds, net, packed in metal drums (averaging 517 pounds net), "as is, where is" in storage.

Further information may be obtained by communicating with the American Turpentine Farmers Association Cooperative, Valdosta, or the naval stores branch, tobacco division, Commodity Stabilization Service, Washington 25, D. C.

Cottonseed Meal Sale Set By USDA for New Orleans

The Department of Agriculture has announced that limited quantities of cottonseed meal acquired by the Commodity Credit Corporation under the 1954 cottonseed price support program will be offered for sale on a competitive bid basis. The meal will be sold through the New Orleans, La., commodity office of the Commodity Stabilization Service, which will issue schedules indicating quantities and locations of meal acquired by CCC.

The offer will serve to make the meal available for immediate distribution through normal channels in areas where the meal is needed. Also, immediate sale of the meal following its acquisition by CCC will hold government storage and handling costs to a minimum, it was pointed out. Detailed information concerning the sale may be obtained from the Commodity Stabilization Service Commodity Office, Wirth Building, 120 Marais street, New Orleans 16.

Chemical Imports Climbed In Germany in First Half

The Federal Republic of Germany sharply increased its imports of chemical products during the first six months of this year to a total of nearly $92,000,000, according to the Bureau of Foreign Commerce last week. This was an increase of more than 40 percent over imports during the first half of 1953.

West Germany exports of chemicals have also increased, it was stated, but not so sharply as have imports. Percentage-wise, imports of chemical products increased to 4.5 percent from 3.8 percent of total German imports during the comparable periods.

The increase of chemical imports extended to all categories; particularly large were those of industrial chemicals, which rose to $11,800,000 in the first half of 1954 from $8,500,000 in the first half of 1953. Imports of pharmaceutical products rose to $7,600,000 from $1,900,000 during the like periods.

The same steadily rising import tendency was seen in imports of plastics and plastic semi-fabrications. Imports of photochemical products which reached a value of $2,500,000 in the first six months of 1954 were double those of the corresponding period in 1953.

Pesticide Situation in Mexico Told

A survey of the pesticide industry of Mexico by the American Embassy at Mexico City found a growing awareness of the need for the products of the industry to increase food production, but also a desire to produce the pesticides within the country rather than depend upon imports for needed supplies.

Reporting on the survey last week, the Bureau of Foreign Commerce stated that consumption of pesticides for agricultural purposes in Mexico may be expected to double within the next six to eight years. Although data on consumption are not available, it is estimated that production plus imports approximated 210,000,000 pounds last year.

Cautions Against Rise in Demand

The bureau cautioned, however, against expecting an increase in Mexican demand for US pesticides and predicted that demand for prepared insecticides will not be great. US producers can expect to supply technical grades and concentrates for formulation in Mexico until such time as BHC and DDT are manufactured in sufficient amounts domestically, it was added, but even this market is not a certainty. Competition is formidable from the French and Belgian producers who are reported to be quoting lower prices on BHC than those prevailing in the United States, and in addition are extending credit up to thirty months.

Estimated production of pesticides by thirty-three firms in Mexico in 1953 was 171,108,000 pounds, of which about 94 percent is believed to have been used for agriculture. Raw materials available for compounding of pesticides are calcium arsenate, sulfur, lead and kerosene. All other raw materials, as well as inerts, must be imported. The United States is the principal source for imports of these materials.

Mexican Government Activities

The Mexican government and individual farmers have seen demonstrated the practical results of using scientifically compounded insecticides, not only on cotton but on secondary farm crops. The government also is beginning to protect stored grains and cereals from destruction by insects. Use of weed killers is small, but gaining in popularity. It is conceivable that the public health program may be expanded and eventually account for a larger consumption of insecticides.

Mexico for many years has been one of the world's principal producers of arsenic.

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Linde Develops a Sieve To Separate Chemicals

Physical separation of chemicals by selective absorption is now a practical possibility for industry because of the commercial development of a so-called molecular sieve, it was revealed last week by Linde Air Products Company, a division of Union Carbide & Carbon Corporation, New York. The molecular sieve material, a synthetic zeolite, comes in two types—sodium aluminum silicate and calcium aluminum silicate.

The dehydrated crystals of synthetic zeolite are of a rigid structure which has a large central cavity with strong electrical surface forces. The outer crystalline structure has evenly spaced holes on all sides leading into the central cavity. The size of the holes in the sodium aluminum silcate crystal is approximately four Angstroms, while in the calcium aluminum silicate it is five Angstroms.

These materials are available in either powder or pellet form. The commercially available pellets are either one-sixteenth or one-eighth inch in size. Price of the absorbent in all forms is $1.95 per pound.

The principle on which the molecular sieve works is based on the size of the crystal apertures and the affinity of the interior cavity for polar chemicals. Straight-chain organic compounds can slip through the side holes in the crystal and thus be entrapped in the cavity, while molecules with side chains, or cyclic compounds, cannot pass through the holes and, therefore, are passed on as effluent. The pellets are placed in a filtering column of suitable size.

The affinity of the dehydrated crystals for polar materials, especially for moisture, makes the sieve especially suitable for removing the last traces of moisture from liquids or gases. Linde stated. Therefore, the company pointed out, both the static and dynamic drying of gases, at temperatures ranging up to or slightly above 200 degrees Fahrenheit, are important industrial applications.

The separation of normal from iso-hydrocarbons is effectively accomplished, Linde said, along with the separation of unsaturated from saturated hydrocarbons. The absorbent can be repeatedly reactivated by heat, by vacuum or by purging with gases—or by a combination of these methods.

Chlorine Equipment Suits Are Ended by Agreement

Termination of antitrust proceedings involving the chlorinating equipment industry was announced last week by the Department of Justice.

Judge Edward William Day of the Federal District Court, Providence, R. I., in the criminal case against Wallace & Tiernan Company and other defendants accepted pleas of nolo contendere to one count of the information from Gerald Peet and William J. Orchard, who are associated with Wallace & Tiernan Company, and agreed to the entry of a nolle prosequi as to the other counts against these individuals. Fines of $5,000 each were levied against Mr. Orchard and Mr. Peet.

Judge Day also agreed to the entry of a nolle prosequi dismissing the information against another defendant, Schutte & Koerting. The criminal proceedings had previously been disposed of as to all other defendants.

Dow Now Producing Two New Glycol Ether Solvents

Production of two new glycol ether solvents and intermediates, "Dowanol 8" "Dowanol 17," in tankcar quantities has been announced by Dow Chemical Company, Midland, Mich.

"Dowanol 8" (ethylene glycol ethyl ether) is a resin solvent used extensively in lacquer, dye and ink formulations. It is also an intermediate in the production of plasticizers. "Dowanol 17" (diethylene glycol ethyl ether) is a brake fluid solvent, and, according to Dow, its powerful solvent action on many resins makes it useful as a lacquer solvent.

Long a producer of a wide range of glycol ethers, Dow also manufactures a propylene glycol methyl ether series and an ethylene glycol methyl ether series.

Fermco Starting Operations

Fermco Chemicals, Inc., Chicago, a newly-formed company, has announced that glucose oxidase-catalase and gluconic acid will be its first products. Dr. Don Scott, vice-president, said the company will be in partial production by early December and essentially full production by the end of the year.

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Corticosteroid Development Disclosed by Squibb & Sons

An entirely new corticosteroid, fluorohydrocortisone acetate, which is ten times as potent topically as hydrocortisone, is being made available by E. R. Squibb & Sons, New York, division of Olin Mathieson Chemical Corporation, under the name "Florinef." The new drug was developed in the laboratories of the Squibb Institute for Medical Research, New Brunswick, N. J. It is being marketed initially in lotion and ointment forms.

Like other corticosteroids and their derivatives, Florinef inhibits inflammatory reactions to bacterial, allergenic, and chemical agents, and also has antipruritic action. Compared with hydrocortisone in these respects, an 0.1 percent concentration of "Florinef" appears to be therapeutically equivalent to 1.0 percent hydrocortisone, and "Florinef" 0.2 percent equivalent to 2.5 percent hydrocortisone. Conditions such as dermatitis (atopic, eczematoid, contact), neuredermatitis, lichen simplex chronicus, eczema, and anogenital pruritis have responded to treatment with "Florinef" oitment and "Florinef" lotion.

The use of "Plastibase" (Squibb cleaginous ointment base) as the vehicle in "Florinef" ointment insures faster, more uniform release of the active corticoid, excellent spreadability, and consistent softness, it was stated. The lotion form of "Florinef" is an aqueous emollient suspension of the Squibb fluorohydrocortisone acetate. No systematic effects are produced with the topical use of "Florinef," and the incidence of adverse local reactions is minimal, Squibb said.

Synthetic Mica Output Set For Early '55 by Mycalex

Synthetic Mica Corporation, a subsidiary of Mycalex Corporation of America, Clifton, N. J., has reported that it expects to begin production early next year at the synthetic mica plant it is now building. The plant, said to be the world's first, is being constructed at Caldwell, N. J., and will have an estimated annual output of 1,000 tons of high grade material. Production of this amount would total about 5 to 10 percent of the nation's current mica needs.

Drug Trade Group Plans Annual Meeting for Dec. 3

The National Drug Trade Conference has scheduled its annual meeting for December 3 at the Washington hotel, Washington, D. C. The meeting will include a memorial to the late Dr. Carson P. Frailey, to be delivered by Dr. Robert L. Swain. Dr. Hugo Schaefer will discuss the conference and its program. "National Legislation and Regulations," will be the subject of a talk by James F. Hoge, with a report of the committee on uniform state legislation following.

The conference's round table discussion will be devoted to the subject of fair trade, with James E. Allen serving as moderator. George Chapman, of Rogers, Hoge & Hills, and Ray Clutter, of Eli Lilly & Co., will be the other members of the discussion group. The reports of the resolution and nominating committees will follow, after which the executive committee will be appointed and officers will be elected.

Polyethylene Is Available From Eastman Chemicals

Eastman Chemical Products, Inc., Kingsport, Tenn., a subsidiary of Eastman Kodak Company, has announced that it is marketing polyethylene molding and extrusion plastic under the trade-name "Tenite." The item is being manufactured by Texas Eastman Company, Longview, Tex. It is the latest product to come from this relatively new Eastman Kodak division.

The product is being offered in the form of spherical pellets, for both molding and extrusion. Carload shipments will be made from Longview, and less carload shipments as well as shipments of colors from Kingsport. It will be offered in a wide variety of colors and color concentrates.

Borax Prices Firm for 1955

J. F. Corkill, vice-president of Pacific Coast Borax Company, a division of Borax Consolidated, Ltd., New York, announced today that 1955 contracts are now being tendered. There will be no change in current prices of borax, boric acid and boron compounds.

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Price Index Shows Strength

The overall OPD price index moved up 0.31 point last week to stand at 106.48. The greatest strength was derived from the oils, fats and waxes market. Advances were made by cottonseed, peanut and soybean meals, as well as by the following oils:—crude coconut, palm, crude and refined soybean. Reductions were numerous and included cocoa butter, copra, grease, lard, oleo stearine and carnauba wax. Corn, palm kernel, peanut, rapeseed and tung oils were lowered. Prices of imported crude naphthalene advanced fractionally in the coal chemicals section. Even higher offerings were made, indicating a good degree of strength in this market. Prices became stabilized at the new higher levels for acetoacetanilide, acetoacet-o-chloranilide and acetoacet-o-toluidide. There was no price activity among agricultural chemicals or textile and leather chemicals.

Chilean crude iodide moved up in the drugs, fine chemicals and botanicals group. Podophyllum resin, derived from mandrake root, was also advanced, as were theobromine alkaloid and some of its derivatives. Prices for coumarin were raised. Other advances in the essential oils, aromatics and flavorings market were effected for East Indian mace, cedarleaf, cinnamon leaf and USP clove oils, as well as for East Indian nutmeg. Ceylon cinnamon dropped, as did Madagascar and Zanzibar cloves, Danish mustard seed, and Argentine and Turkish poppy seed. Both black and white pepper were weaker. Prices were advanced for amyl alcohol in the industrial organic chemicals market. Propane moved up in some directions among petroleum derivatives. Casein and shellac prices firmed.

Prices Advanced

Acetoacetanilide, 5c. per lb. (48).
Acetoacet-o-chloroanilide, 8c. per lb. (48).
Acetoacet-o-toluidide, 4c. per lb. (48).
Alcohol, amyl, ferment., refd., 128°132°C., 9c. per lb. (45).
ACS grade, 9c. per lb.
Caraway seed, Dutch, 1¼c. per lb. (61).
Casein, Argentine, 3¾c. per lb. (75).
Cottonseed meal, $3 per ton (80).
Coumarin, 25c. per lb. (61).
Iodine, crude, 30c. per lb. (53).
Mace, East India, 10c. per lb. (61).
Naphthalene, crude, imp., ¼c. per lb. (48).
Nutmeg, East India, 1c. per lb. (61).
Oil, cedarleaf, 15c. per lb. (61).
Cinnamon leaf, 50c. per lb. (61).
Clove, USP, 50c. per lb. (61).
Coconut, crude, ¼c. per lb. (80).
Palm, 1 10c. per lb. (80).
Soybean, crude, ¾c. per lb. (80).
refd., ⅞c. per lb.
Peanut meal, $4 per ton (80).
Podophyllum resin, 70c. per lb. (53).
Shellac, lemon #2, 1c. per lb. (75).
Superfine, 1c. per lb.
TN, 1c. per lb.
Theobromine alkaloid, 15c. per lb. (53).
and sodium acetate, 15c. per lb.
sodio-salicylate, 15c. per lb.
Soybean meal, $2 per ton (80).
Tin, 1c. per lb. (35).

Prices Reduced

Cinnamon, Ceylon, #2, 1c. per lb. (61).
Clove, Madagascar, 1c. per lb. (61).
Zanzibar, 5c. per lb.
Cocoa butter, 5c. per lb. (80).
Copra, $5 per ton (80).
Grease, choice, white, ¼c. per lb. (80).
Lard, cash, 2½c. per lb. (80).
Mustard seed, Danish, ½c. per lb. (61).
Oil, corn, crude, ¾c. per lb. (80).
refd., ⅞c. per lb.
Palm kernel, ¼c. per lb. (80).
Peanut, crude, ¼c. per lb. (80).
refd., ¼c. per lb.
Rapeseed, ¼c. per lb. (80).
Tung, ⅝c. per lb. (80).
Oleo stearine, ½c. to 1c. per lb. (80).
Pepper, black, Malabar, 3c. per lb. (61).
white, 3c. per lb.
Poppy seed, Argentine, 3c. per lb. (61).
Turkish, 3c. per lb. (61).
Wax, carnauba No. 1, Parnahyba, 1c. per lb. (80).

OPD Price Index

THE OIL, PAINT AND DRUG REPORTER'S relative record of prices of chemicals and related materials is currently as follows:—

(100—1949 average)

November 18, 1954	November 12, 1954	November 20, 1953
106.48	106.17	106.16

Polyisocyanates Production Rise Is Projected by duPont

Plans to construct additional facilities for the manufacture of polyisocyanates at its Chambers Works in Deepwater Point, N. J., were disclosed last week by the organic chemicals department of E. I. duPont de Nemours & Co., Wilmington, Del. All design and construction work will be conducted by duPont's engineering department and superivsed by J. C. Land, the plant's field project manager. Work is expected to start immediately, with completion of the entire project scheduled for mid-1956.

Chemurgic Council to Meet

The National Farm Chemurgic Council will hold its annual chemurgic conference at the Deshler-Hilton hotel in Columbus, Ohio, March 22 through 24. The latest developments in agricultural research will be the chief topic of the conference. John W. Ticknor is the conference chairman.

Cosmetic Unit Honors Poucher December 9

The annual technical meeting and medal award dinner of the Society of Cosmetic Chemists will be held December 9 at the Biltmore hotel, New York. The award for distinguished service to the industry will be presented to William A. Poucher, chief perfumer and technical advisor to Yardley's of London, Ltd. The officers for the coming year will be installed at a luncheon session.

Mr. Poucher has been named to receive the award "in recognition of his pioneering scientific contributions to the perfume industry," Donald H. Powers, president of the society, has announced. Gregory Thomas, president of Chanel, Inc., and Pierre Bouillet, of Givaudan-Delawanna, Inc., will speak on the accomplishments of the medalist.

The following papers will be presented at the morning session:—"The Use of Acylated Amino Acids in Cosmetics," by H. W. Zussman and W. Lennon, of Geigy Industrial Chemicals; "The Physical Chemistry of Stearic Acid," by C. C. Tillotson, of Procter & Gamble Company; "Polymorphism of Glycerides Distinguishable by X-Ray Diffraction," by E. S. Lutton, of Procter & Gamble, and "The Use and Newer Applications of the Silicone Compounds in Dermatology and Cosmetics," I. I. Lubowe, of the skin and cancer unit of New York University-Bellevue Medical Center.

Papers to be presented during the afternoon session will include the following:—"Newer Aspects of Epidermal Differentiation," by Peter Flesch, of the department of dermatology of the University of Pennsylvania; "Alterations in the Skin Physiology Following Continuous Use of Soaps and Detergents," by D. J. Birmingham, of the Public Health Service; "The Mechanism of Percutaneous Penetration and Adsorption," by Stephen Rothman, of the dermatology section of the department of medicine of the University of Chicago, and "The Physiology and Histo-Chemistry of Hair Growth," by H. B. Chase, of Brown University.

Rayonier Tree Chemical Developed for Drilling Mud

Within two years of its coining the word "silvichemical" to describe a special group of complex organic compounds, Rayonier, Inc., New York, unveiled at Houston, Tex., last week its first major "silvichemical" to be produced commercially. The product is a new, domestic dispersant for oil well drilling muds, the first of what promises to be a new line of special chemicals derived from trees.

Called "Rayflo," the new chemical is a reddish-brown powder obtained by involved chemical processes from the bark of western hemlock, chief source for Rayonier's chemical cellulose produced at its Pacific northwest mills. It was said that "Rayflo" is the first major silvichemical (any chemical other than cellulose extracted from trees) to have immediate commercial possibilities. Rayonier established a silvichemistry department at its research division at Shelton, Wash., within recent years, where intensive investigation in the new science of "silvichemistry" has been under way. The company has plans for further diversification activities along silvichemical lines, and new manufacturing facilities have been constructed at Rayonier's Grays Harbor, Wash., division, for silvichemical production.

The new product was hailed as "a complete replacement for imported dispersants, such as South America's quebracho. Extensive and rigid field testings in Pa-

—Continued on page 60

Stauffer Planning Larger Calif. Fertilizer Facilities

Stauffer Chemical Company has announced plans to expand its fertilizer manufacturing facilities at Vernon and Richmond, Calif. The first step in a program costing over $1,000,000 will be taken at Vernon, where a new plant will be built capable of producing approximately 500 tons per day of pelletized superphosphate and other modern ammonium phosphate fertilizers.

The first of its kind, the new facility employs a process developed and designed by Stauffer. It will be located adjacent to the company's fertilizer plant at Vernon. Completion and initial production of the addition are planned for mid-1955. The new plants will offer the fertilizer manufacturing trade improved products for blending, as well as granular, dust-free combinations of plant food having the complete analysis in every pellet. Wilson & Geo. Meyer & Co. will act as exclusive sales agents for these new products.

Nuodex President

Simon Askin, president of Heyden Chemical Corporation, New York, has been elected president and a directof of Nuodex Products Company, Newark, N. J. Mr. Askin has also been elected chairman of the board of Nuodex International, a wholly-owned subsidiary. The entire common stock of Nuodex was acquired by Heyden on November 1.

Church & Dwight Offers A New Form of Sal Soda

Church & Dwight Company, New York, is offering a new concentrated form of sal soda. According to the company, the new material has marked advantages over the old refined crystals, having only 27 percent water crystallization against 60 percent for the crystals. Concentrated sal soda is claimed to be more stable, to give twice the alkali yield and to be easier to handle than refined crystals.

It was pointed out that Church & Dwight will continue to carry refined crystals in addition to the new concentrated form of sal soda. The new product, in paper bags, f.o.b. Syracuse, N.Y., is priced at $2.30 per hundred pounds for carloads or truckloads and at $2.60 for less-carload quantities.

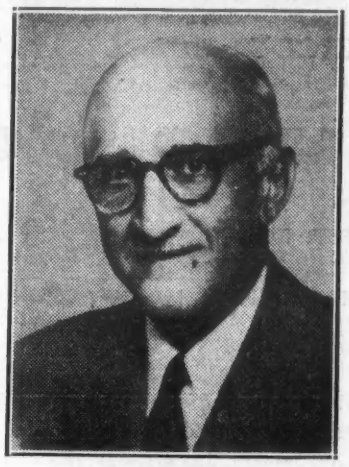
Dow Chemical Is Acquiring Versenes Company for Cash

Dow Chemical Company, Midland, Mich., announced that it will buy for cash all of the outstanding stock of Versenes, Inc., Framingham, Mass., manufacturer of chemical specialties. The deal is due to be completed on December 1.

Versenes, Inc., formerly known as Bersworth Chemical Company, produces a group of chelating agents—materials which have the ability to selectively inactivate or combine with various metal ions. Dr. F. C. Bersworth, president of Versenes, will become a Dow research consultant, while Frank Kottek, Versenes treasurer and general manager, will continue as Dow's production manager at Framingham.

Mallinckrodt Makes Three Major Promotions in Sales

Three promotions in the sales department have been announced by Joseph Fistere, president of Mallinckrodt Chemical Works, St. Louis, Mo. G. C. Bradshaw has been made director of sales research, Walter S. Keutzer has been named western division sales manager and Warren F.



G. C. Bradshaw

Michener has been appointed assistant western division sales manager.

Before being named director of sales research, Mr. Bradshaw was western division sales manager for Mallinckrodt for seven years. He joined Mallinckrodt in 1925 and in 1936 was made assistant western division sales manager.

In addition to his direct sales responsibilities, Mr. Bradshaw instigated many general merchandising programs at Mallinckrodt. He wrote the first edition of the widely distributed "Chemistry of Photography" and in 1935 he organized the Mallinckrodt Plan Board. This board of lead-

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Sodium Molybdate Samples Being Offered by Millmaster

Millmaster Chemical Corporation, New York, as eastern sales agent for S. W. Shattuck Chemical Company, Denver, Colo., is now offering working samples of sodium molybdate for use as an agricultural chemical.

Molybdenum first proved its worth to agriculture in Australia and New Zealand, where large acreages of cropland, formerly too poor to warrant treatment with fertilizers or other agricultural chemicals, provided a major new market for their products through the application of molybdenum.

In these areas, treating the soil with molybdenum has greatly reduced — and in many cases entirely eliminated—the need for liming. For pasture and hay legumes, two ounces of sodium molybdate may replace several tons of limestone, it was pointed out. Samples are available from Millmaster at 11 West 42nd street, New York 36.

Chemicals Use in Auto Output Told by CMRA

Indications of present and future demand for products of the chemical and allied industries by automobile makers highlighted the all-day meeting held last week in the Sheraton-Cadillac hotel, Detroit, Mich., by the Chemical Market Research Association.

Discussing the outlook for paints, Melvin M. Gerson of Ford Motor Company's paint and art leather plant saw immediate changes in the offing. He predicted "an increased use of water emulsion materials because of reduced health and safety hazard to the industry," and also expected stepped-up consumption of epoxy undercoats.

He said that an increase in use of epoxy undercoats is implicit in the characteristics of the product, which include improved adhesion and greater durability under a wide variety of application conditions. However, he added that this will only come about "as suitable cross-linking agents and proper methods of application are developed."

Alkyd Based Primer Use Rise Seen

Alkyd based primer will also increase in use, the speaker felt. He regarded as "a certainty" the continuing use of nitrocellulose and alkyd enamels as topcoats with modifications of the molecular structure for better chip resistance, higher gloss and lower curing schedules.

"The purpose of all this," Mr. Gerson pointed out, "is first to provide an automobile that is brighter in color and shinier in appearance than last year's model; secondly, an automobile that retains that bright new look for a longer period of time. The condition of the paint has always been accepted as a measure of the quality of the car.

"We need paints of better durability on an automobile," he stressed, "so that they will mirror the rest of the improvements in durability made by the automobile manufacturer, and permit the owner to realize a proper return on his investment when he trades for an even brighter and shinier model."

Covering synthetic fibers, Edwin J. Grajeck of Collins & Aikman Corporation cited nylon as the one fiber which has most nearly met the needs of the automobile industry. He estimated that about 2,500,000 pounds of nylon have gone into automotive fabrics this year.

Advantages of Nylon

"Nylon has luster, strength, excellent wearing qualities and good resistance to sunlight, water and solvents," he indicated. "It can be processed into yarn and woven into fabrics, and dyes comparatively easily with good fastness properties." However, he emphasized that this condition was not always so.

"Our early production of nylon fabrics was so full of streaks," he recalled, "that

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Wallace & Tiernan Completes Negotiations for Maltbie Labs

F. G. Merckel, president of Wallace & Tiernan, Inc., Belleville, N. J., has announced the completion of negotiations for the acquisition of Maltbie Laboratories, Inc., Newark, N. J. Maltbie stockholders will receive three shares of Wallace & Tiernan stock for each share of Maltbie stock.

Maltbie volume in the ethical drug field is presently about equal to that of Wallace & Tiernan. In making his announcement, Mr. Merckel stated that Maltbie was acquired for the purpose of expanding the W&T product line in accordance with a previously announced policy. He also expressed the belief that the combination would permit some savings in operations and would strengthen the Wallace & Tiernan position in the drug field. Maltbie started business in Buffalo, N. Y., in 1888 as a physician's supply house and was incorporated in 1906 at which time the move who made to New Jersey. At present the company operates plants in Newark and Hanover, N. J.

The company has been a pioneer in the field of pharmaceutical research. It was the first to announce the discovery of sulfathiozole in 1939 and developed the first commercially successful American process for the production of dehydrocholic acid in 1941. In recent years Maltbie, through its extensive work on homatropine methylbromide, has been one of the leaders in the field of antispasmodics and anticholinergics for the treatment of gastrointestinal disturbances and peptic ulcer. Recently, Maltbie introduced a new spinal anesthetic, under the name "Lacaine," which produces sensory analgesia with little or no motor involvement.

Chemical Industry Seen Spending $2.73 Billion on New Construction

The chemical industry has completed privately-financed construction projects representing an investment of more than $1,216,000,000 during the past twelve months, and has under construction or definitely planned another $1,514,000,000, according to a survey of chemical industry expansion announced yesterday by the Manufacturing Chemists' Association.

The survey covered more than 570 non-government financed projects of the industry, 215 of which were completed between November 1, 1953, and October 31, 1954. Some 219 projects are now being built at an estimated total cost of $933,000,000, the survey showed, and another 138 projects, to be built at an estimated cost of $581,000,000, have been definitely committed.

Projects in Planning Stage

The total of projects completed this year, and those now under construction or planned, most of which will be completed within three years, is $2,730,000,000. MCA pointed out that many more projects have been announced as "under consideration" or in the planning stage, and that while many of these will be started within the next year, none of them was included in this survey.

"The expenditure of private industry capital on building shown by this survey indicates a tremendous boost to our economy in payments for construction wages and materials," said William C. Foster, MCA president.

"In addition," he pointed out, "these new facilities will mean substantial increases in jobs and operating payrolls of the chemical industry, earnings for share owners, tax returns for federal and local governments, and new or improved products for consumers. Despite some reported cutbacks in construction plans earlier this year, this survey appears to bear out the prediction that the chemical industry will quadruple its production capacity by 1975."

Government-Financial Construction

In addition to this construction financed by the corporations themselves, MCA reported that there is an estimated total of some $3,360,000,000 government-financed chemical construction now underway or planned, most of it under contract with chemical companies. This construction, which includes a number of Atomic Energy Commission contracts, takes in projects now underway which started three years ago and some which will not be completed before late 1956.

Chemical construction projects were reported in forty-three of the forty-eight

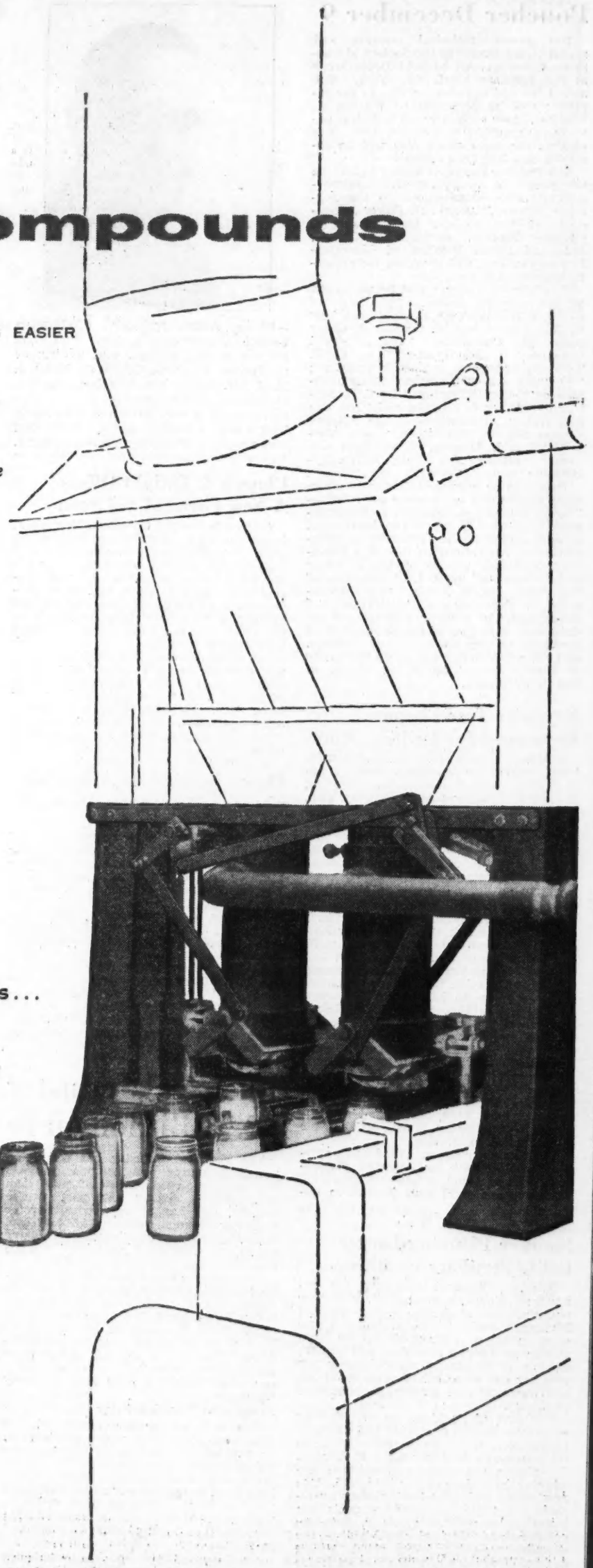
—Continued on page 45

MALLINCKRODT

Bismuth Compounds

IN THE PROPER FORM

MAKE PHARMACEUTICAL MANUFACTURING EASIER



Mallinckrodt supplies a variety of bismuth compounds in controlled physical form to meet pharmaceutical manufacturing requirements. For example, the *controlled bulk* of Mallinckrodt ***Bismuth Subcarbonate*** assures uniform fill where the bismuth salt is the major ingredient in the preparation; *controlled particle size* (a factor in settling) results in a uniform suspension, important to product appearance.

Mallinckrodt bismuth compounds are used in many pharmaceutical preparations as coating agents for mucous membranes, especially in the treatment of gastritis, enteritis and gastric and peptic ulcers. Certain bismuth compounds are used externally in the form of dusting powders, ointments, pastes and suspensions in the topical treatment of wounds, skin eruptions, ulcers and burns.

A few Mallinckrodt bismuth compounds most used by pharmaceutical manufacturers:

Bismuth Subcarbonate USP Powder, Heavy Powder, Light Powder and Extra Light Powder

Bismuth Subgallate NF Powder

Bismuth Subnitrate NF Powder, Heavy Powder

Bismuth Subsalicylate USP Powder and Special Light Powder

Write for technical information sheets.

CALL ON MALLINCKRODT FOR YOUR CHEMICAL NEEDS . . .

Through years of experience, many pharmaceutical manufacturers have learned to trust Mallinckrodt to provide the required chemical when needed — not only bismuth compounds but many other pharmaceutical raw materials.

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Chicago • Cincinnati • Cleveland • Los Angeles • Philadelphia

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Association Meetings

This Week

Manufacturing Chemists Association, semi-annual meeting and winter conference, Statler hotel, New York, November 23.

Agricultural Ammonia Institute, annual meeting and trade show, Jung hotel, New Orleans, La., December 6-8.

American Chemical Society, Dallas-Fort Worth, Tex., section, southwest regional meeting, Fort Worth, December 2-4.

American Institute of Chemical Engineers, annual meeting, Statler hotel, New York, December 12-15; Kentucky hotel, Louisville, Ky., March 20-23; Shamrock hotel, Houston, Tex., May 1-4.

American Pharmaceutical Manufacturers' Association, combined midyear and eastern section meeting, Waldorf-Astoria hotel, New York, December 6-8.

American Society for Testing Materials, committee week, Netherland Plaza hotel, Cincinnati, Ohio, January 31-February 4; annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 26-July 1.

American Water Works Association, annual conference, Chicago, June 12-17.

Association of American Soap and Glycerine Producers, annual convention, Waldorf-Astoria hotel, New York, January 26-28.

British Plastics Exhibition, Olympic Stadium, London, June 1-11.

Chemical and Allied Buyers Group of National Association of Purchasing Agents, Palmer House, Chicago, January 18; Commodore hotel, New York, January 25.

Chemical and Plastic Industries Equipment Salon, Parc des Expositions, Paris, France, December 2-12.

Chemical Bureau Alumni Association of the War Production Board and National Production Authority, fall cocktail party, Washing hotel, Washington, D. C., December 2.

Chemical Institute of Canada, protective coatings division conference, Royal York hotel, Toronto, February 24, Ritz Carlton hotel, Montreal, February 25; chemical engineering division conference, Ottawa, March 7-9; annual conference and exhibition, Quebec City, Quebec, May 30-June 1.

Chemical Market Research Association, joint meeting with Commercial Chemical Development Association, Edgewater Beach hotel, Chicago, January 20-21; annual meeting, Plaza hotel, New York, May 18-19.

Chemical Specialties Manufacturers Association, annual meeting, New Yorker hotel, New York, December 6-8.

Chlorine Institute, annual meeting, Biltmore hotel, New York, January 26.

Drug, Chemical and Allied Trades section of the New York Board of Trade, annual dinner, Waldorf-Astoria hotel, New York, March 3.

Forest Products Research Society, national meeting, Olympic hotel, Seattle, Wash., June 20-23.

National Drug Trade Conference, annual meeting, Washington hotel, Washington, D. C., December 3.

National Farm Chemurgic Council, annual chemurgic conference, Deshler-Hilton hotel, Columbus, Ohio, March 22-24.

National Petroleum Association, spring meeting, Cleveland, Ohio, April 13-15; annual meeting, Atlantic City, September 14-16.

Packaging Machinery Manufacturers Institute, semi-annual meeting, Palmer House, Chicago, April 16-17.

Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, William Penn hotel, Pittsburgh, Pa., February 28-March 4.

Plant Maintenance and Engineering Show, International Amphitheatre, Chicago, January 24-27.

Society of Cosmetic Chemists, annual technical meeting and medal award dinner Biltmore hotel, New York, December 9.

Society of the Plastics Industry, annual meeting and conference, cruise on the Queen of Bermuda, May 7-15.

Synthetic Organic Chemical Manufacturers Association, annual business meeting and dinner, Commodore hotel, New York, December 6.

Toilet Goods Association, scientific section meeting, Waldorf-Astoria hotel, New York, December 8; annual meeting, Waldorf-Astoria hotel, New York, May 10-12.

World Petroleum Congress, Rome, June 6-15.

American Gas Ass'n Elects H. N. Mallon to Its Board

H. N. Mallon, president of Dresser Industries, Dallas, Tex., has been elected a director of the American Gas Association, to serve for a two-year term. Others elected as officers of the association are:—President, F. M. Banks, president of Southern California Gas Company; first vice-president, D. H. Mitchell, president of Northern Indiana Public Service Company; second vice-president, C. H. Zachry, president of Southern Union Gas Company, and treasurer, V. T. Miles, treasurer of Long Island Lighting Company.

Virginia Institute Appoints

Dr. Fonatine C. Armistead has been appointed director of the Virginia Institute for Scientific Research, Richmond, Va. Dr. Armistead has been at the Massachusetts Institute of Technology, Cambridge, Mass., for the past seven years as a staff member in the physics department and also as an employee there of Texaco Development Corporation.

Plant Food Institute Is Almost a Reality

The plan calling for consolidation of the National Fertilizer Association with the American Plant Food Council to form a new non-profit trade association has cleared its next to last hurdle.

NFA's membership approved the proposal at the association's fall meeting earlier this month in Hollywood, Fla. If sanctioned by the APFC membership at a special convention scheduled for Washington Dec. 1, the consolidated association —to be known as the National Plant Food Institute—would come into being on July 1 of next year. The council's board of directors has already endorse the plan.

Commenting on the merger scheme, Dr. Russell Coleman, NFA president, said, "While recognizing that there have been certain advantages in having two competitive trade associations, nevertheless, I have come to the conclusion that the industry can best be served through one strong national organization. I am convinced that if our two associations are consolidated into a strong 'National Plant Food Institute,' our program can be much more effective."

Account of Negotiations Given

Prior to the consolidation vote by the NFA membership, a detailed account of the negotiations that have led up to the merger proposal was presented by E. A. Geoghegan, vice-president of the Southern Cotton Oil Company, New Orleans, La., and NFA board chairman. It was pointed out that NFA is one of the oldest non-profit trade associations in America, having existed in its present form since 1926 when associations of manufacturers in the south, north and west were combined into a single national group. With predecessor organizations, however, its history extends back to 1894. APFC was founded in 1945.

Formal merger talks began October 4 when a joint committee of the two groups met in Washington to draw up an agreement for consolidation. This agreement was approved by the NFA board on October 19 and by the APFC board on October 26.

Oris V. Wells, administrator of the Agricultural Marketing Service of the Department of Agriculture, and Dr. Richard Bradfield, head of the agronomy department of Cornell University, were principal speakers at NFA's Florida meeting.

In discussing the economic future of farming, Mr. Wells predicted, "Farmers over the next several years will probably be faced with a level price outlook." Speaking on the importance of organic materials in chemical fertilization, Dr. Bradfield pointed out, "For the highest type of agriculture, it is not a question of organic or chemical fertilizers; both are essential and as inseparable as Siamese twins."

Fair Trade Council Picks President, Other Officers

John W. Anderson, president of Anderson Company, Gary, Ind., has been re-elected president of the American Fair Trade Council. Mr. Anderson has served continuously as president of AFTC since 1945.

Other officers elected include:—Vice-President, M. R. Bissell, 3rd, vice-president, Bissell Carpet Sweeper Company, Grand Rapids, Mich.; secretary, L. H. Erickson, president, Borg-Erickson Corporation, Chicago; and treasurer, J. A. Goldfarb, president, Union Underwear Company, New York. Russell R. Casteel, vice-president, Olin Mathieson Chemical Corporation, New York, has been elected to serve with the above-named officers on the board of directors of the council.

AIChE's Junior Award Will Go to duPont Man

H. P. Grace, of E. I. duPont de Nemours & Co., Wilmington, Del., has been named recipient of the 1954 junior award in chemical engineering, granted by the American Institute of Chemical Engineers. Given for outstanding contributions to the literature of chemical engineering, Mr. Grace will receive the award December 14 at a banquet of the institute at the Statler hotel, New York.

N.E. Chemical Club to Meet

The Chemical Club of New England has invited the president of the New York, New Haven & Hartford Railroad Company, Patrick B. McGinnis, to be its guest speaker at the fall meeting at the Parker House, Boston, November 22.

Polak's New President

Bernard Polak has been named president of Polak's Frutal Works, Inc., Middletown, N. Y., to succeed his late brother, Fritz J. Polak, who died in a plane crash at Shannon, Ireland, in September.

Society of Plastics Industry Unit Is Planning Conference

The fifth plastics film, sheeting and coated fabrics division conference of the Society of the Plastics Industry will be held December 7 and 8 at the Commodore hotel, New York. Several hundred representatives of the plastics film and sheeting industry will attend the session to hear technical, commerical and general papers, dealing with all facets of this branch of the plastics industry.

Papers to be presented at the sessions will encompass such subjects as the use of woven monofilaments, vinyl coating, laminating technics, extruded and cast vinyls, industrial and agricultural applications of vinyl film and sheeting, application of vinyl film and sheeting to automotive trim, rigid vinyls, and the growth of vinyl plastics in the wall covering field.

The program committee is under the chairmanship of James S. Bruskin, manager, vinyl film sales, Goodyear Tire & Rubber Company, Akron, Ohio. Other plastics industry members of the committee include:—S. Everett Perlberg, branch manager, Adamson United Company, New York; J. R. Price, merchandising manager, Bakelite Company, New York, a division of Union Carbide & Carbon Corporation; David Carnegie, jr., plastics consultant, Wallpack Center, N. J.; Bernard Mittman, treasurer, Elm Coated Fabrics, New York; Kenneth L. Edgar, general sales manager, Velon Products Division, Firestone Plastics Company, Pottstown, Pa.; M. L. Briscoe, manager, plastics film sales, B. F. Goodrich Company, Marietta, Ohio; M. E. Wendt, manager, chemical products development, Goodyear Tire & Rubber Company, Akron, Ohio; F. S. Strauss, president, Harte & Co., New York; Chester M. Robbins, vice-president, finishes division, Interchemical Corporation, New York; M. G. Caine, sales manager, vinyl resins department, Monsanto Chemical Company, Springfield, Mass.; Willard de Camp Crater, manager, vinyl sales, Naugatuck Chemical, a division of U. S. Rubber Company, Naugatuck, Conn., and J. P. Frank, president of Presto Plastics Products Company, New York.

Fertilizer Tonnage Down, Ingredients Usage Higher

American farmers used a slightly smaller tonnage of fertilizer in the year ending July 1 than in the previous twelve months, the National Fertilizer Association has announced. Organization officials pointed out, however, that consumption of the plant foods — the active ingredients in fertilizer—probably was somewhat greater in 1953-54 than during the previous year, thus setting a new all-time record. This is because of the trend toward greater availability of materials containing a higher concentration of the plant food elements.

Total consumption in the United States of all kinds of fertilizer during 1953-54 was 20,290,549 tons as compared with 20,603,448 tons in 1952-53. This represents a decrease in tonnage of 1.5 percent. The apparent leveling-off of fertilizer consumption this last year is attributed by the association to various factors, including drought, over wide areas of the country, planting restrictions on major crops, and

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APMA Meeting Hears Larrick December 6

Commissioner George P. Larrick, of the Food and Drug Administration, will be among the speakers at the combined midyear and eastern section meeting of the American Pharmaceutical Manufacturers' Association, to be held December 6 through 8 at the Waldorf-Astoria hotel, New York.

Robert A. Hardt, vice-president of Hoffmann-LaRoche, Inc., and president of APMA, will give the opening address during the morning of December 6. The theme of the first session will be "The Preservation of Our Equity in the Foreign Field," and the following papers relating to that theme will be presented:—"Foreign Investments—A New Era in the Growth of American Business," by Joseph A. Cardinale, of the law firm of Momsen & Freeman; "Practical Side of Foreign Investments," by Edward A. O'Neal, jr., vice-president of the overseas division of Monsanto Chemical Company, and "Export Credit and Exchange Guarantees," by Francis X. Scafuro, assistant vice-president of the Bank of America International.

Chain Drug Stores a Topic

During the afternoon of the opening day, the following papers will be presented:—"What Chain Drug Stores Will Do With Pharmaceuticals — Prescriptions or Otherwise—in the Years to Come," by G. B. Burrus, president of Peoples Drug Stores, Inc.; "Advertising," by C. B. Larabee, president and publisher of *Printer's Ink*, and "Sales" by Don G. Mitchell, chairman of the board of Sylvania Electric Products, Inc.

During the morning of December 7 the following papers will be presented:—"Automation in the Pharmaceutical Industry," by Dr. A. Mattacks, professor in the school of pharmacy of the University of Michigan; "New Product Development," by Allan J. Greene, director of commercial development for Chas. Pfizer & Co., and "Inventory Security," by Sidney R. Hamby, chief engineer for Warner-Hudnut, Inc.

Tobacco and Smoking Papers

The afternoon session will have as its theme, "Does Tobacco Smoking Shorten Life?" The following papers will be presented:—"The Influence of Smoking on Coronary Artery Disease and Longevity," by Dr. E. Cuyler Hammond, professor of biometry and director of graduate studies in statistics at Yale University; "The Statistical Evidence for a Decreased Longevity From Lung Cancer Resulting From Smoking," by Dr. L. S. Snegireff, associate professor of cancer control, Harvard University School of Public Health; "A Quest Into the Environmental Causes of Cancer of the Lung," by Dr. W. C. Hueper, chief of the environmental cancer section of the National Cancer Institute, and "The Experimental Approach to the Tobacco-Cancer Problem," by Dr. Ernest L. Wynder, head of the section of epidemiol-

—Continued on page 88

Science Group Will Hold Annual Conclave Dec. 30

The industrial science section of the American Association for the Advancement of Science will hold its annual all-day meeting at the Claremont hotel, Berkeley, Calif., beginning at 9:30 a.m., December 30.

The morning session will be presided over by Dr. Jesse E. Hobson, director of the Stanford Research Institute. Principal speakers and their subjects are to be:—Paul E. Kloepsteg, associate director, National Science Foundation, "The Role of Government in Basic Research," Dr. Kenneth S. Pitzer, dean, University of California College of Chemistry, "The Role of Industry in Basic Research."

A highlight of the event will be a luncheon featuring an address by Francis J. Curtis, vice-president, Monsanto Chemical Company, who will review "Problems of Industrial Chemical Management." Chairman of the day will be George L. Parkhurst, vice-president, Standard Oil company of California.

Moderator of the afternoon discussions will be Earl P. Stevenson, president, Arthur D. Little, Inc. Speakers and their subjects will be:—Dr. Frank C. Croxton, assistant director, Battelle Memorial Institute, "Basic Research Abroad With Particular Reference to England and West Germany"; Dr. Luis W. Alvarez, professor of physics, radiation laboratory, University of California, "Neglected Areas of Basic Research in the Physical Science"; Dr. Ralph W. Tyler, director, Center for Advanced Study in Behavioral Science, "Neglected Areas of Basic Research in the Social Sciences."

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Current Market Quotations

Chemicals and Related Materials

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Unless otherwise indicated, listings are first-hand quotations prevailing, according to information and belief, November 19 on large lots, f.o.b. New York, with the lowest in the left-hand column and the highest in the right-hand column. The listings do not represent bid and asked prices nor a range over the week. Differences between high and low may be accounted for by differences in quantity, quality, locality, or individual suppliers' views.

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A

Acacia (see Gum arabic)

Acenaphthene, below 92.5 C., m.p., dms. works lb. .40 - —

above 92.5 C., m.p., bbls., dms., works lb. .41 - .50

Acetaldehyde, 99%, dms., c.l., frt. equald lb. .1250- .1435

l.c.l., frt. equald lb. .1350- .1535

tanks, frt. equald lb. .1050- .1300

Acetaldol (see Aldol).

Acetanilide, tech., bbls., c.l., dlvd. lb. .29 - —

ton lots lb. .30 - —

smaller lots lb. .30½- —

USP, bbls., 2,000-lb. lots lb. .80 - —

smaller lots lb. .81 - .86

Acetic anhydride, dms., c.l., dlvd. E. lb. .15½- —

l.c.l., dlvd. E lb. .17 - —

tanks, dlvd. E lb. .14 - —

Acetoacetanilide, fib. dms., c.l., dlvd. lb. .75 - .80

l.c.l., dlvd lb. .76 - .81

Acetoacet-o-chloroanilide, fib., dms., c.l., dlvd lb. 1.27 - 1.35

l.c.l., dlvd lb. 1.28 - 1.36

Acetoacet-o-toluidide, fib., dms., c.l., dlvd. lb. .78 - .82

l.c.l., dlvd lb. .79 - .83

Acetone, CP, dms., c.l., dlvd. lb. .10 - —

l.c.l., dlvd. lb. .11 - —

tanks, dlvd. lb. .08 - —

Methyl (see MD

Acetonitrile, dms., c.l., works lb. .45 - —

l.c.l., works lb. .47 - —

Acetophenetidine, USP, bbls., works, frt. equald lb. 1.15 - 1.17

Acetophenone cns., dms lb. 1.21 - 1.85

tech., dms., l.c.l., works lb. .75 - —

p-Acetylaminobenzaldehyde thiosemicarbazone, dms, frt. adjusted. lb. 17.50 - 21.00

N-Acetyl-p-aminophenol, dms., frt. adjusted lb. 1.75 - 1.85

Acetyltributyl citrate tech. dms., c.l., works lb. .33½- —

l.c.l., works lb. .34½- .38½

tanks, works lb. .32 - —

Acetyltriethyl citrate, tech., dms., c.l., works lb. .37½- —

l.c.l., works lb. .38½- —

tanks, works lb. .36 - —

Acid, abietic, coml., dms., c.l., works lb. .12 —

l.c.l., ex whse lb. .1490- —

cryst., dms., c.l., works lb. .06½- —

l.c.l. works lb. .07 - .07½

Acetic, coml., or redist., 28%, bbls. 100 lbs. 4.80 - —

56%, bbls. 100 lbs 8.25 - —

70%, bbls. 100 lbs. 9.95 - —

80%, bbls 100 lbs. 10.45 - —

glacial, syn., CP, dms., dlvd. 100 lbs. 15.00 - 16.00

tech., dms., c.l., dlvd 100 lbs. 10.50 - 12.00

l.c.l., same basis 100 lbs. 11.00 - 13.00

tanks, dlvd 100 lbs. 10.00 - —

USP cbys., inclusive, dlvd., 100 lbs. 24.00 - 25.00

Acetic anhydride (see Acetic anhydride above).

Acetylsalicylic, USP special, bbls., makers, primary distrib., point of shipt., 1,000-lb. lots lb. .60 - —

standard, fine, cryst., gran., (30-40 mesh) powd., (80 mesh), bbls., 1,000-lb. lots. lb. .55 - —

Freight equald, shipt. identical quantity over standard routes, from N. Y., Phila., Midland, Mich., Chicago and St. Louis.

Adipic, fib. dms., works lb. .37 - .37½

Aminoacetic, NF, bbls., frt. adjusted lb. 1.50 - 1.75

p-Aminobenzoic, tech., dms., works lb. 1.74 - 1.77

USP, dms., 1,000-lb. lots or more, works lb. 2.50 - —

smaller lots, works, same basis lb. 2.55 - 2.60

p-Aminosalicylic, dms., 1,000-lb. lots or more, frt. adjusted lb. 4.00 - —

smaller lots, same basis lb. 4.05 - 4.50

Anthranilic, bbls., frt. equald lb. 1.21 - —

Arsenous, tech., (see Arsenic, white).

USP (see Arsenic trioxide).

Ascorbic USP dms., 25-50 kilo lots. kilo. 16.00 - —

10-kilo lots kilo. 16.35 - —

5-kilo lots kilo. 16.75 - —

bots. 1-kilo lots kilo. 17.00 - —

500-gram lots kilo. 17.50 - —

Battery, chys. c.l., works, E. 100 lbs. 2.35 - —

l.c.l., works, E 100 lbs. 2.65 - 3.45

Benzoic, tech., bbls., dms., 100-lb. lots or more lb. .44 - —

USP, bbls., dms. 100-lb. lots or more lb. .54 - —

Betahydroxynaphthoic (see Acid, b-Oxynaphthoic).

Betaoxynaphthoic (see Acid, b-Oxynaphthoic).

Boric, tech. 99½%, cryst., bgs., c.l., works ton. 124.25 —

ton lots, ex whse., N. Y. or Chi ton. 172.00 —

smaller lots, same basis, ton. 177.00 —

bbls., c.l., works ton. 148.75 —

ton lots, ex whse., N. Y. or Chi ton. 196.50 —

smaller lots, same basis, ton. 201.50 —

gran., bgs., c.l., works ton. 99.25 —

ton lots, ex whse., N. Y. or Chi ton. 147.00 —

smaller lots, same basis, ton. 152.00 —

bbls., c.l., works ton. 123.75 —

ton lots, ex whse., N. Y. or Chi ton. 171.50 —

smaller lots, same basis, ton. 176.50 —

bulk, c.l., works ton. 94.25 - —

Acid, boric, tech., powd., bgs., c.l., works ton. 104.25 - —

ton lots, ex whse., N. Y. or Chi ton. 152.00 - —

smaller lots same basis, ton. 157.00 - —

bbls., c.l., works ton. 128.75 - —

ton lots, ex whse., N. Y. or Chi ton. 176.50 - —

smaller lots same basis, ton. 181.50 - —

Boric acid in kegs $45.50 per ton higher than in paper bgs. USP boric acid $25 per ton higher.

Broenners, bbls lb. 1.76 - —

Butyric, 99%, dms., c.l., works, lb. .34 - —

l.c.l., works lb. .34½- —

tanks, works lb. .32½- —

Cacodylic, bots lb. 10.50 - 13.00

Camphoric, nat., dms lb. 4.00 - 4.75

syn., dms. lb. 4.00 - 4.75

Capric, dms lb. .25¼- .27

Caprylic, dms lb. .27¼- .29½

Cassella dms., 100% basis, frt., alld lb. 1.44 - 1.75

Castor oil, split, dms lb. .35½- .36

Chicago, bbls. frt alld lb. 3.21 - —

Chloroacetic, mono-, purif., flake, 99%, dms lb. .23½- .25½

tech., flake, 96-97%, frt. equald, dms lb. .20 - .21

o-Chlorobenzoic, fib. dms., works lb. 1.13 - —

p-Chlorobenzoic, fib. dms., works lb. 1.59 - 1.62

Chlorosulfonic, dms., c.l., frt. equald lb. .0465- —

l.c.l., frt. equald lb. .0515- —

tanks, frt. equald lb. .0415- —

Acid, chlorosulfonic, in stainless steel dms. ½c. per lb. higher.

Cholic, 100-lb. lots, fib. dms. lb. 6.00 - 6.25

Chromic 99¾%, dms., c.l., works lb. .27½- —

l.c.l., works lb. .28 - .29

NF (see Chromium trioxide).

Cinnamic, refd., bots lb. 2.50 - 3.50

Citric, USP, anhyd., gran., fine gran dms., c.l. lb. .28¾- —

10,000-lb. lots, 1 shipt. lb. .29¼- —

smaller lots lb. .29¾- .31¼

hydrous, gran., fine gran., dms., c.l. lb. .27 - —

10,000-lb. lots, 1 shipt. lb. .27½- —

smaller lots lb. .28 - .29½

Powdered citric acid ½c. higher.

Acid, Cleve's, mixed, bbls lb. .79 - —

Coconut oil, dist., dms lb. .24¼- .26

tanks lb. .22½- —

dbl. dist., dms lb. .25 - .26¾

tanks lb. .23¼- —

Corn oil, dist., dms lb. .14½- .16¼

tanks lb. .12¾- —

Cottonseed oil, dist., dms lb. .14 - .15¾

tanks lb. .12¼- —

2,3-Cresotic, dms., ton lots, works. lb. .66 - —

smaller lots lb. 1.82 - 2.00

Cresylic, coaltar, dom., 50% 207°C or above ret dms. c.l., frt. equald gal. .98 - —

l.c.l., same basis gal. 1.03 - —

non-ret., dms. c.l., same basis gal. 1.01 - —

l.c.l. same basis gal. 1.04 - —

tanks, same basis gal. .90 - —

204° to 207°C., ret., dms., c.l., same basis gal. 1.03 - —

l.c.l., same basis gal. 1.08 - —

non-ret., dms. c.l. same basis gal. 1.06 - —

l.c.l., same basis gal. 1.09 - —

tanks, same basis gal. .95 - —

imp. 75% at 215°C. or over, dms. ex whse gal. .75 - .90

petroleum, dom., 195° to 213°C, non-ret. dms., c.l., San Francisco and Los Angeles gal. .71 - —

l.c.l., same basis gal .73 - .75

tanks, same basis gal. .58 - —

200° C. to 222° C., tanks, Wilmington, Cal gal. .58 - .63

211° C. to 236° C., non-ret. dms., c.l., San Francisco and Los Angeles gal. .63 - —

l.c.l., same basis gal. .65 - .67

tanks, same basis gal. .50 - —

220° C. to 242° C., tanks, Wilmington, Cal gal. .50 - .53

245° C. to 298° C., tanks, Wilmington, Cal gal. .46 - —

Crotonic, fib. dms., 200 lbs. or more, works lb. .44 - —

Cyanoacetic, tech., bbls lb. .90 - 1.25

Dehydrocholic, injection, fib. dms. 100-lb. lots lb. 14.75 - —

oral, fib. dms., 100-lb. lots lb. 10.25 - —

Desoxycholic, fib. dms, 100-lb. lots. lb. 15.00 - —

Dichlorophenoxyacetic (see under 'D' 2,4-D)

Diethylbarbituric (see Barbital)

Diglycolic, bgs., works lb. .14 - —

Acid, 2-ethyl hexoic, dms., c.l., works lb. .35 - —

l.c.l., works lb. .35½- —

tanks, works lb. .33½- —

F, crude, paste, bbls., works lb. 2.10 - —

Folic, bots., fib. cns. kilo-lots or more gram. 1.60 - —

Formic, 85%, cbys., c.l., works lb. .1570- —

l.c.l., works lb. .1620- .1730

90%, cbys., c.l., works lb. .1625- —

l.c.l., works lb. .1675- .1775

Fumaric, tech., bgs., dms lb. .27 - .28

Gallic, NF VII, bbls., 1,000-lb. lots lb. 1.80 —

smaller lots lb. 1.82 - 2.00

tech., bbls., 1,000-lb. lots lb. 1.58 - —

smaller lots lb. 1.69 - 1.78

Gamma, dry, grd., bbls., frt. alld. lb. 1.50 - —

paste, bbls., frt. alld lb 1.45 - —

Gentisic, 100-lb. fib. dms lb. 8.50 - —

Gluconic, tech., 50% bots lb. .25 - .35

cbys. lb. .19 - —

dms. lb. .15½- —

l-Glutamic, 99½% fib. dms., 100 lb lots works lb 2.45 - 2.53

25-lb. lots, works lb. 2.54 - 2.60

Glycerophosphoric, 35%, dms., works lb. 2.25 - 2.35

Glycolic (see Acid hydroxyacetic).

H, dry, bbls., works, 100% basis, lb. .82 - —

paste, bbls., works, 100% basis, lb. .80 - —

Hydriodic, 1.50 s.g., cbys lb. 2.94 - —

1.70 s.g., cbys lb. 3.23 - —

Hydrobromic, medicinal, 48%, cbys., dlvd E lb. .37 - .43

Hydrochloric, anhyd. (see Hydrogen chloride).

18° cbys., c.l., works 100 lbs. 2.50 - —

l.c.l., dlvd. Metropolitan area 100 lbs. 2.90 - 3.05

tanks, works, frt. equald ton. 28.00 - —

20° cbys., c.l., works 100 lbs. 2.60 - —

l.c.l., dlvd. Metropolitan area 100 lbs. 3.00 - 4.00

tanks, works, frt. equald ton. 30.00 - —

22° cbys. c.l., works 100 lbs. 3.15 - —

l.c.l., dlvd Metropolitan area 100 lbs. 3.25 - 4.50

tanks, works, frt. equald ton. 35.00 - —

CP, USP, consumers, cbys., extra, c.l., works lb. .11¾- —

l.c.l., same basis lb. .13¼- .13¾

5-pint bots., extra, cs., c.l., same basis lb. .16¾- —

l.c.l., same basis lb. .19¼- —

Acid, hydrochloric, CP, USP, prices to dealers 1½c. per lb less.

Hydrocyanic, cyls., frt. alld lb. .75 - 85

dilute, NF 2% 5-lb bots lb. .40 —

Hydrofluoric, anhyd. (see Hydrogen fluoride).

tanks, works lb. .21 - —

70%, steel dms., works lb. .18½- .22½

Hydrofluosilicic, basis 30%, dms., works lb. .06 - —

Hydroxyacetic, tech., 70%, non-ret. bbls., Phila., 100% basis lb. .136 - —

tanks, Belle, W. Va., 100% basis lb. .095 - —

Hypophosphorus, purif., 50%, cbys lb. 1.30 - 1.32

USP, cbys lb. .83 - —

Isonicotinic, 100 lb fib. dms, works lb. 5.00 - —

Hydrazide (see Isoniazid).

J, bbls., works, 100% basis lb. 2.50 - 2.85

Koch, bbls., frt. alld lb. .64 - .70

L, bbls., works lb. 1.25 - —

Lactic, edible, 50%, bbls., 20 or more lb. .17 - .20

smaller lots lb. .1750- .2100

80%, bbls., 5 or more lb. .30 - .3640

smaller lots lb. .305 - .3690

USP, 85%, cbys lb. .85 - .88

plastic grade, 50%, bbls., 20 or more, works lb. .2175- —

1 to 19 lb. .2225- .2278

80%, bbls., 5 or more lb. .3818- —

tech., 22%, bbls., c.l., works 100 lbs. 6.30 - —

l.c.l., works 100 lbs. 6.70 - —

cbys., l.c.l., works 100 lbs. 7.20 - 12.20

44%, bbls., c.l., works 100 lbs. 11.45 - 11.98

l.c.l., works 100 lbs. 11.15 - 12.50

Laurent's, bbls lb. .60 - —

Lauric, 90%, dms lb. .35¼- .37

Linseed oil, dist., dms lb. .2025- —

w. w., dms lb. .2325- —

Maleic, cryst., powd., dms lb. .37 - .38

Malic, tech., dms lb. .50 - —

Mandelic, NF, dms., 1,000-lb. lots. lb. 2.35 - —

smaller lots lb. 2.40 - 2.50

Metanilic, dms., works lb. .57 - .75

Methacrylic, glacial, 98%, dms., truckloads, works lb. .54½- —

smaller lots, works lb. .55 - —

Molybdic, 85-92%, dms. works lb 1.27 —

Monochloroacetic, purif. (see Acid, Chloroacetic mono-).

Muriatic (see Acid, hydrochloric).

Myristic, dms lb. .28 - .29½

Naphthenic, 220-230 acidity, dms., works lb. .13¼- —

tanks, works lb. .11¼- —

Naphthol (1)-4-sulfonic (see Acid Nevile and Winthers)

Naphthol(1)-5-sulfonic (see Acid, L).

Naphthol(1)5-sulfonic,8-amino (see Acid, S).

Naphthol(1)-3,6-disulfonic,8-amino (see Acid H).

Naphthol(2)-6,8-disulfonic (see Acid, Gamma)

(5)-7-Sulfonic,2-amino (see Acid, J).

Naphtholsulfonic, mixed (see Acid, Cleve's, mixed).

Naphthylamine(1)-5-sulfonic (see Acid, Laurent's).

(2)-6-sulfonic (see Acid, Bruenner's).

(2)-7-sulfonic (see Acid, F).

(2)-1-sulfonic (see Acid, Tobias).

Abbreviations

Used in OPD Market Quotations

alld.	allowed	distr.	distributor	NNR	New and Nonofficial Remedies
amorph.	amorphous	djns.	demijohns	No.	number
AMP	American melting point	dlvd.	delivered	nom.	nominal
anhyd.	anhydrous	dms.	drums	o-	ortho
a.p.a.	available phosphoric acid	dom.	domestic	ord.	ordinary
artif.	artificial	E.	east	oz.	ounce
ASTM	American Society for Testing Materials	e.p.	end point	p-	para
Atl.	Atlantic	equald.	equalized	Pac.	Pacific
Be.	Baume	exp.	expressed	pf.	proof
bbls.	barrels	F.	fahrenheit	phos.	phosphate
bgs.	bags	ferment.	fermentation	photo.	photographic
bls.	bales	f.f.a.	free fatty acid	pkgs.	packages
bots.	bottles	f.f.c.	free from chlorine	powd.	powdered
b.p.	boiling point	fib.	fiber	precip.	precipitated
b.p.l.	bone phosphate of lime	f.o.b.	free on board	prod.	producer
b.r.	boiling range	f.p.a.	free of prussic acid	pt.	point
bxs.	boxes	frt.	freight	pulv.	pulverized
C.	centigrade	gal.	gallon	purif.	purified
cbys.	carboys	gran.	granular	redist.	redistilled
CD	completely denatured	grd.	ground	refd.	refined
c.i.f.	cost, insurance, freight	i.&a.	iron and aluminum	refy.	refinery
cks.	casks	i.b.p.	initial boiling point	reg.	regular
c.l.	carlots	imp.	imported	resub.	resublimed
cns.	cans	incl.	included	ret.	returnable
coml.	commercial	indust.	industrial	SD	specially denatured
conc.	concentrated	kgs.	kegs	s.d.	single distilled
CP	chemically pure	l-	laevo	S. E.	southeast
cps.	centipoises	lacq.	lacquer	sec.	secondary
cryst.	crystal	lb.	pound	secs.	seconds
cs.	cases	l.c.l.	less than carlots	s.g.	specific gravity
ctns.	cartons	liq.	liquid	shipt.	shipment
cyls.	cylinders	m-	meta	soln.	solution
d-	dextro	m.a.p.	mixed aniline point	s.u.	standard unit
dbl.	double	min.	minimum	syn.	synthetic
denat.	denatured	m.p.	melting point	tanks.	railroad tankcars
dest-dist.	destructive-distilled	N-	nitrogen	tech.	technical
dl-	dextro-laevo	n-	normal	tert-	tertiary
dist.	distilled	nat.	natural	USP	U. S. Pharmacopoeia
		neut.	neutral	vis.	viscosity
		NF	National Formulary	VM&P	varnish makers & painters
				W.	west
				whse.	warehouse
				w. w.	water-white

A unit-ton is 2,000 pounds of 1 percent of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the price figure shown gives the price of 2,000 pounds of the material.

Acid, Nevile and Winther's—Alcohol, Ethyl, 190 Pf.

Acid, Nevile and Winther's, dms., frt. alld lb. 1.20 - —
Nicotinic, USP, dms., frt. adjusted kilo 9.00 - 9.30
Amide, USP, (see Nicotinamide).
Nitric 36° Be cbys., c.l., works, E. 100 lbs. 5.75 - —
l.c.l., works, E 100 lbs. 6.05 - 6.85
38° Be cbys., c.l., works, E. 100 lbs. 6.25 - —
l.c.l., works, E 100 lbs. 6.55 - 7.35
40° Be, cbys., c.l., works, E 100 lbs. 6.75 - —
l.c.l., works, E 100 lbs. 7.05 - 7.85
42° Be cbys., c.l., works, E. 100 lbs. 7.25 - —
l.c.l., works, E 100 lbs. 7.55 - 8.35
50.5 to 68% HNO_3, tanks, works, 100% basis 100 lbs. 3.90 - —
94½ to 95½% HNO_3, tanks, works, 100% basis 100 lbs. 4.90 - —
CP, NF, consumers, cbys., extra c.l., works lb. .13½- —
l.c.l., same basis lb. .15 - .15½
8 pint bottles, extra, cs., c.l., same basis lb. .17½- —
l.c.l., same basis lb. .19 - .25
p-Nitrobenzoic, dms., c.l., works lb. .72 - —
l.c.l., works lb. .73 - —
Oleic, s.d., dms lb. .16¾- .18½
tanks lb. .15 - —
dbl. dist., (white), dms lb. .19¼- .21
tanks lb. .17½- —
Oleum (see Acid, sulfuric, fuming).
Orthochlorobenzoic (see Acid, o-Chlorobenzoic).
Orthocresotinic (see Acid, 2,3-Cresotic).
Oxalic, bbls., c.l., works lb. .16½- —
10,000-lb. lots, works lb. .16¾- —
smaller lots, works lb. .17¾- —

Acid, b-oxynaphthoic, bbls., works. lb. 1.14 - —
Palm oil, dbl. dist., dms lb. .14 - .15¾
Para-aminobenzoic (see Acid, p-Aminobenzoic)
Para-aminosalicylic (see Acid, p-Aminosalicylic).
Parachlorobenzoic (see Acid, p-Chlorobenzoic)
Paramethylphenylcinchonic (see Neocinchophen)
Paranitrobenzoic (see Acid, p-Nitrobenzoic)
Paratoluidinmetasulfonic (see Acid, p-Toluidine m-sulfonic)
Phenylacetic, pure, cryst., cns. lb. .75 - 1.70
Phenylcinchoninic (see Cinchophen).
Phenylglycolic (see Acid, mandelic).
Phosphoric, food grade, 75%, cbys. c.l., works 100 lbs. 7.30 - —
l.c.l., works 100 lbs. 7.80 - 8.30
tanks, works 100 lbs. 5.10 - —
NF, 85%, cbys., c.l., works lb. .08½- —
l.c.l., works lb. .09 - .09½
Picric, NF, bbls. lb. .60 - —
tech., bbls. lb. .34 - .35
Propionic, syn., pure, dms., c.l., works lb. .21 - —
l.c.l., works lb. .22 - —
tanks, works lb. .19 - —
Pyrogallic, NF, (see Pyrogallol).
tech., bbls lb. 2.76 - 2.99
Ricinoleic (see Acid, castor oil, split).
S., bbls., works lb. 3.25 - —
Salicylic, crude, fib. dms lb. .37 - —
sublimed, tech., fib. dms., c.l. lb. .39 - —
l.c.l. lb. .46 - —
dyestuffs grade, fib. dms lb. .41 - —
USP, cryst., fib. dms lb. .48 - —
powd., fib. dms lb. .53 - —
Sebacic, purif., dms., c.l., works. lb. .64 - —
l.c.l., works lb. .66 - .70

Acid, soybean oil, dbl. dist., dms. lb. .16¼- .18
tanks lb. .14½- —
s. d., dms lb. .14¾- .16½
tanks lb. .13 - —
Stearic, dbl. pressed, bgs lb. .13¾- .15½
single pressed, bgs lb. .13¼- .15
triple-pressed, bgs lb. .16 - .17¾
Succinic, purif., cryst., bbls., works lb. .63 - .75
Sulfanilic, tech., dms., c.l., frt. alld lb. .19 - —
l.c.l., frt. alld lb. .21 - —
Sulfuric, 60° Be, cbys., c.l., works 100 lbs. 2.00 - —
l.c.l., works 100 lbs. 2.45 - —
tanks, works ton. 18.60 - —
66° Be, cbys., c.l., works 100 lbs. 2.25 - —
l.c.l., works 100 lbs. 2.55 - 3.35
tanks, works ton. 22.35 - —
98%, tanks, works ton. 23.50 - —
99-100%, tanks, works ton. 23.95 - —
CP, NF, consumers cbys. extra, c.l., works frt. equald lb. .09¾- —
l.c.l., same basis lb. .11¼- .11¾
5 pt. bots., extra, cs., c.l., works, frt. equald lb. .13¼- —
l.c.l., same basis lb. .14¾- .20¾
oleum, 20%, tanks, works ton. 25.00 - —
40% tanks, works ton. 29.00 - —
65% tanks, works ton. 39.50 - —
Tallow, dist., dms lb. .13½- .15¼
hydrogenated, bgs lb. .12¾- .14½
rubbermakers, bgs lb. .11½- .13
Tannic, NF, fluffy, bbls., 1,000-lb. lots lb. 1.59 - 1.60
smaller lots lb. 1.65 - 1.76
powd., bbls., 1,000-lb. lots lb. 1.50 - —
smaller lots lb. 1.51 - 1.69
tech., dms lb. .95 - —

Acid, tartaric, USP, dom., 230 or 250-lb. dms., c.l. lb. .41 - —
10,000-lb. lots, 1 shipt. lb. .41½- —
smaller lots lb. .42 - —
100-lb. dms lb. .43 - —
small dms lb. .45 - .51
imp., bgs lb. .36½ Nom.
Thioglycolic, refd., cbys., 100% basis lb. 1.80 - 1.86
Tobias, bbls., frt. alld lb. .74 - —
Toluenesulfonic, dms., c.l., works, o lb. .16 - —
l.c.l., works lb. .17½- —
p-Toluidine-m-sulfonic, bbls., works lb. .92 - 1.04
Trichloroacetic, bots. lb. 2.00 - 2.50
Trichlorophenoxyacetic (see under 'T' 2,4,5T)
Undecylenic, dms lb. 1.40 - —
Aconite root, bls lb. .50 - .55
Aconitine, cryst., potent, bots oz. 78.00 - 85.00
Acrolein, tech., dms., c.l., works lb. .47 - —
l.c.l., works lb. .47½- —
Acrylonitrile, dms., c.l., works lb. .33 - —
l.c.l., works lb. .34 - —
tanks, works lb. .31 - —
ACTH, cryst., bulk, 1,000 units/gram, bots gram. 15.00 - —
Adeps lanae (see Lanolin).
Adrenocorticotropic hormone (see ACTH).
Agar, USP, Kobe No. 1, strip, bls. lb. 2.90 - 3.10
powdered, 30 mesh, fib., dms lb. 3.40 - 3.50
dl-Alanine, dms., works lb. 8.50 - 11.00
Albumin, blood, dark (see Blood, dried, soluble).
light, dms., t.c.l. lb. .65 - .90
Egg, edible, flake, bbls lb. 1.27 - 1.29
powd., bbls lb. 1.31 - 1.33
tech., cryst., bbls lb. .85 - .87
Alcohol, allyl, dms., c.l., dlvd lb. .33 - —
l.c.l., dlvd lb. .33 - —
tanks, dlvd lb. .30 - —
Amyl, ex fusel oil (see Fusel oil, refd.)
ferment., refd., 128°132°C., dms., l.c.l., dlvd lb. .43 - —
ACS grade, dms., c.l., dlvd lb. .45 - —
ex-pentane, mixed, amyls, dms., c.l., frt. alld lb. .17 - —
l.c.l., frt. alld lb. .18 - —
tanks, frt. alld lb. .15 - —
primary, dms., c.l., frt. alld. lb. .19¼- —
l.c.l., frt. alld lb. .20¼- —
tanks, frt. alld lb. .17¼- —
sec-synthetic, dms., c.l., frt. alld., works lb. .18 - —
l.c.l., works lb. .19 - —
tanks, works lb. .16 - —
tert-synthetic, dms., c.l., frt. alld., E lb. .17 - —
l.c.l., frt. alld. E lb. .18 - —
tanks, frt. alld. E lb. .15 - —
1-pentanol, (syn. normal), dms., c.l., works lb. .42 - —
l.c.l., works lb. .43½- —
tanks, works lb. .40 - —
2-pentanol, dms., c.l., works lb. .65 - —
l.c.l., works lb. .70 - —
tanks, works lb. .60 - —
Benzyl, NF, dms lb. .64 - .79
tech., dms., dlvd lb. .47½- .49
n-Butyl, ferment., dms., l.c., frt. alld lb. .15 - —
l.c.l., frt. alld lb. .16 - —
tanks, frt. alld lb. .13 - —
n-synthetic, dms., c.l., dlvd. lb. .15 - —
l.c.l., dlvd lb. .16 - —
tanks, dlvd lb. .13 - —
sec-synthetic, dms., c.l., dlvd. lb. .13 - —
l.c.l., dlvd lb. .14 - —
tanks, dlvd lb. .11 - —
tert-synthetic, dms., c.l., frt. alld. lb. .14 - —
l.c.l., frt. alld lb. .15 - —
tanks, works lb. .12 - —
Capryl, 85%, dms., c.l., works lb. .18 - —
l.c.l. works lb. .18½- —
tanks, works lb. .16½- —
85%, dms., c.l., works lb. .19½- —
l.c.l., works lb. .20 - —
tanks, works lb. .18 - —
Cetyl, extra, 4b., cns., 500-lb. lots or more lb. .73 - —
smaller lots lb. .80 - 1.15
NF, 4b., cns., 140-lb. lots or more lb. .58 - .83
smaller lots lb. .59 - .83
Cinnamic, bots lb. 2.15 - 2.75
Decyl, bots lb. 1.75 - 2.00
indust. (see 1-Decanol).
Denat., CD12, CD13, CD14, CD17, dms., c.l., dlvd. E. of Rockies gal. .54½- —
l.c.l., same basis gal. .59½- .65½
tanks, dlvd., same basis gal. .41½- —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Unit.
Proprietary solvent, dms., c.l., dlvd. E. of Rockies gal. .56 - —
l.c.l., same basis gal. .61 - .67
tanks, same basis gal. .43 - —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Unit.
SD1, cms., c.l., dlvd. E. or Rockies gal. .55½- —
l.c.l., same basis gal. .60½- .66½
tanks, same basis gal. .42½- —
SD2B, dms., c.l., dlvd. E. of Rockies gal. .54 - —
l.c.l., same basis gal. .59 - .65
tanks, same basis gal. .41 - —
SD3A, dms., c.l., dlvd. E. of Rockies gal. .53 - —
l.c.l., same basis gal. .58 - .64
tanks, same basis gal. .40 - —
SD23A, dms., c.l., dlvd. E. of Rockies gal. .55½- —
l.c.l., same basis gal. .60½- .66½
tanks, same basis gal. .42½- —
SD23H, dms., c.l., dlvd. E. of Rockies gal. .56 - —
l.c.l., same basis gal. .61 - .67
tanks, same basis gal. .43 - —
SD29, dms., c.l., dlvd. E. of Rockies gal. .54½- —
l.c.l., same basis gal. .59½- .65½
tanks, same basis gal. .41½- —
SD30, dms., c.l., dlvd. E. of Rockies gal. .53 - —
l.c.l., same basis gal. .58 - .64
tanks, same basis gal. .40 - —
SD35A, dms., c.l., dlvd. E. of Rockies gal. .56 - —
l.c.l., same basis gal. .61 - .67
tanks, same basis gal. .43 - —
SD40, dms., c.l., dlvd. E. of Rockies gal. .54 - —
l.c.l., same basis gal. .59 - .65
tanks, same basis gal. .41 - —
West coast dlvd. prices are the same as eastern prices, except in Idaho, Montana, Oregon and Washington, where a 5c. differential on tankcars is maintained.
Diacetone, acetone-free, dms., c.l., dlvd. lb. .14 - —
l.c.l., dlvd lb. .15 - —
tanks, dlvd lb. .12 - —
tech., dms., c.l., dlvd lb. .13½- —
l.c.l., dlvd lb. .14½- —
tanks, dlvd lb. .11½- —
Ethyl, 190 pf., USP, tax paid, dms., c.l., dlvd. E. of Rockies. gal. 20.48 - —
l.c.l., same basis gal. 20.53 - 20.59
tanks, same basis gal. 20.35 - —
tax free, dms., c.l., dlvd. E. of Rockies gal. .53 - —
l.c.l., same basis gal. .58 - .64
tanks, same basis gal. .40 - —

DPPD

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Bowman Feed Products, Inc., has been appointed as a distributor of DPPD for the Feed Industry by

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DPPD is currently being added to Broiler Mashes, Chick Starters at the rate of ¼ lb. per ton.

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130 Central Avenue, Holland, Michigan

Alcohol, ethyl, absolute, 200 pf., tax paid, dms., c.l., dlvd. E. of Rockies..gal.21.58 - —
l.c.l., same basis..gal.21.63 -21.69
tanks, same basis..gal.21.45 - —
2-Ethylbutyl, dms., c.l., works..lb. .29½- —
l.c.l. works..lb. .30 - —
tanks, works..lb. .28 - —
2-Ethylhexyl, dms., c.l., dlvd. E.lb. .23¾- —
l.c.l., same basis..lb. .24¾- —
tanks, same basis..lb. .21¾- —
Furfuryl, cns., works..lb. .29 - —
dms., c.l., Cedar Rapids, Ia..lb. .21 - —
Newark, N. J..lb. .21½- —
l.c.l., Cedar Rapids, Ia..lb. .22 - —
Newark, N. J..lb. .22½- —
tanks, Memphis, Tenn..lb. .184 - —
Isoamyl (see Alcohol, amyl, fermentation, refined).
Isobutyl, dms., c.l., dlvd..lb. .14 - —
l.c.l., dlvd..lb. .15 - —
tanks, dlvd..lb. .12 - —
Iso-octyl, dms., c.l., dlvd. E..lb. .23 - —
l.c.l., dlvd. E..lb. .24 - —
tanks, dlvd. E..lb. .21 - —
Isopropyl, refd., 91%, dms., c.l., dlvd..gal. .48 - —
l.c.l., dlvd..gal. .55 - —
tanks, dlvd..gal. .35 - —
95% dms., c.l., dlvd..gal. .50 - —
l.c.l., dlvd..gal. .57 - —
tanks, dlvd..gal. .37 - —
99% dms., c.l., dlvd..gal. .52 - —
l.c.l., dlvd..gal. .59 - —
tanks, dlvd..gal. .39 - —
Lauryl, bots..lb. 2.00 - 2.50
Methyl (see Methanol).
Methylamyl (see Carbinol, methylisobutyl).
Octyl, perfumer's grade, bots..lb. 1.75 - 3.25
tech. (see Octanol, normal).
2-Phenylethyl, extra, dms..lb. 1.14 - 1.45
standard, dms..lb. 1.26 - 1.35
n-Propyl, dms., c.l., dlvd..lb. .12 - —
l.c.l., dlvd..lb. .13 - —
tanks, dlvd..lb. .10 - —
Tetrahydrofurfuryl, cns., Cedar Rapids, Iowa..lb. .54 - —
dms., c.l., Niagara Falls, N. Y..lb. .44½- —
l.c.l., Newark, N. J., Cedar Rapids, Ia..lb. .47 - —
tanks, Niagara Falls, N. Y..lb. .43 - —
indust. grade, dms., c.l., Niagara Falls, N. Y..lb. .305 - —
l.c.l., Newark, N. J., Cedar Rapids, Ia..lb. .33 - —
tanks, Niagara Falls, N. Y..lb. .29 - —
Wood (see Methanol).
Aldol, 95%, dms., works..lb. .23 - —
denaturing grade, dms..gal. 2.15 - —
Aldrin, 60% soln., dms., c.l., works, frt. alld..lb. .538 - —
l.c.l., works, frt. alld..lb. .588 - —
Aletris root, bgs..lb. 1.75 - 1.85
Algin (see Sodium alginate).
Allethrin, 100%, dms., frt. alld..lb.32.00 - —
90%, dms., frt alld..lb.28.50 - —
soln., 20%, dms., 100-lb. lots, frt. alld..lb. 6.50 - —
2½%, dms., frt. alld..lb. .90 - 1.25
Allspice (see Pimento).
Allyl bromide, cbys., works..lb. 1.35 - 1.40
Chloride, dms., c.l., dlvd..lb. .17 - —
l.c.l., dlvd..lb. .18 - —
tanks, dlvd..lb. .15 - —
Starch, solid, dms., works..lb. .52¾- .54¾
solution, 40%, toluol-butanol, dms., works..lb. .25½- .26¼
Aloe, Cape, cs..lb. .40 - —
powd., cs..lb. .50 - —
Curacao, kgs..lb. .50 - .55
Socotrine, kgs..lb. No prices
Aloin, USP, bbls., dms., kgs..lb. 3.75 - 3.82
Alphanaphthol (see a-Naphthol).
Alphanaphthylamine (see a-Naphthylamine).
Alphanitronaphthalene (see a-Nitronaphthalene).
Alphapicoline (see a-Picoline).
Alphaterpineol (see a-TerpineoD).
Alphatocopherol (see a-TocopherolD).
Alum, ammonium, gran., bgs., works..100 lbs. 4.30 - —
lump, dms., works..100 lbs. 5.05 - —
powd., dms., works..100 lbs. 5.20 - —
USP, burnt, dms..lb. .20 - .21
hydrous, dms..lb. .07¾- .08
Potassium, gran., bgs., works. 100 lbs. 4.55 - —
lump, dms., works..100 lbs. 5.30 - —
powd., dms., works..100 lbs. 5.45 - —
USP, burnt, dms..lb. .20 - .21
hydrous, dms..lb. .07¾- .08
Potash-chrome, dms..lb. .17 - —
Sodium, dms., c.l., works..100 lbs. 4.60 - —
l.c.l. works..100 lbs. 5.00 - —
Alumina, calcined, bgs., c.l., works. lb. .0385- —
l.c.l. works..lb. .0410- .0510
Aluminum acetate, basic soln., 24%, bbls., l.c.l., works..lb. .14 - —
Chloride, coml., anhyd., dms., c.l., works, frt. equald..lb. .15 - —
l.c.l., works, frt. equald. lb. .1550- —
cryst., dms., c.l., works..lb. .1030- —
l.c.l., works..lb. .1070- —
soln., 32°, cbys., c.l., works..lb. .0369- —
l.c.l., works..lb. .0435- .0960
tanks, works..100 lbs. 2.80 - —
NF, gran., dms., works..lb. .29 - .31
Fluoride, tech., anhyd., bgs., c.l., works..lb.15.75 - —
l.c.l., works..lb.16.75 -18.75
Aluminum fluoride in fib. dms. 0.35c. per lb. higher.

Formate, basic soln., cbys..lb. .09½- —
l.c.l., works..lb. .10 - —
Hydrate, heavy bgs., c.l., frt. equald..ton.60.00 - —
l.c.l., works..ton.65.00 -85.00
light bgs. dlvd..lb. .17 - —
Hydroxide, gel, pnarmaceutical, 14-15% Al_2O_3, fib dms., works..lb. .22 - —
contract, works..lb. .21 - —
9-9½% Al_2O_3, fib. dms., works..lb. .19 - —
contract, works..lb. .18 - —
dried, USP, XIV, fib., dms., works..lb. .82½- —
contract, works..lb. 79½- —
tech., powder (see Aluminum hydrate).
Metal, 99%+, ingots, 10,000-lb. lots, frt. alld..lb. .222 - —
pigs, 10,000-lb. lots, frt. alld..lb. .205 - —
Oxide, amorphous (see Alumina, calcined).
Paste, lining, extra-fine, dms..lb. .63½- —
standard, dms..lb. .43 - —
Powder, lining, extra fine, dms..lb. 1.02½- —
standard, dms..lb. .72 - —

Aluminum powder and paste prices are f.o.b. shipping point. Add 1c. per lb. for 100-lb. dm., 1½c. per lb. for 50-lb. dm., 3c. per lb. for 10-lb. can and 5c to 12c per lb for smaller containers. Deduct 1c. per lb. for single shipment of 400 to 1,499 lbs., 2c. for 1,500 to 4,999 lbs., 3c. for 5,000 to 29,999 lbs., and 4c. for 30,000 lbs or more. Where destination is within the continental U. S., a deduction equivalent to the lowest available common carrier transportation rate will be made from seller's invoice on orders of 200 lbs. or over.

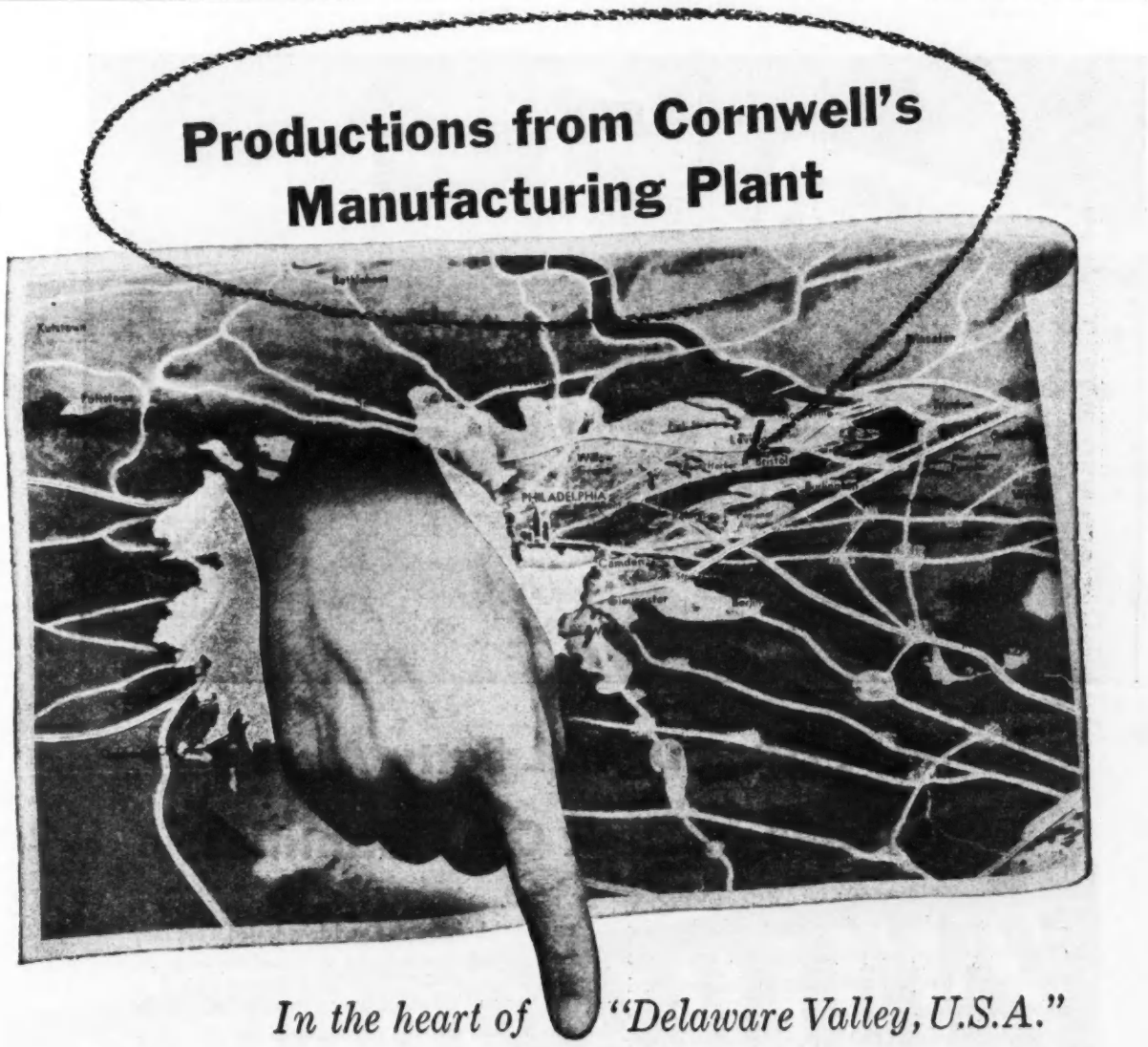
Resinate, precip., 2.1% Al, dms., frt. alld..lb. .30 - —
Stearate, dibasic, ctns., c.l..lb. .33 - .37
l.c.l..lb. .34 - .37
monobasic, ctns., c.l..lb. .33 - —
l.c.l..lb. .34 - .37
tribasic ctns., c.l..lb. .33 - —
l.c.l..lb. .34 - .37

Aluminum sulfate, cml., bulk, c.l., works..100 lbs. 1.85 - —
grd., c.l., bgs., works..ton.37.00 - —
lump, c.l., bgs., works..ton.40.00 - —
iron-free, bgs., c.l., works., frt. equald..100 lbs. 3.55 - —
l.c.l., works, frt. equald 100 lbs. 3.95 - —
USP, gran., dms., works..lb. .16 - .18
powd., dms., works..lb. .22 - .24
Trihydrate, heavy (see Aluminum hydrate, heavy).
Ambergris, gray, bots..oz. 8.00 -10.00
Aminoazotoluene, base, bbls., 100% basis..lb. 1.03 - 1.18
o-Aminobiphenyl, dms., c.l., works, lb. .32½- —
l.c.l., works..lb. .33 - —
tanks, works..lb. .31 - —
Aminoethyl ethanolamine, dms., c.l., dlvd..lb. .46½- —
l.c.l., dlvd..lb. .45 - —
tanks, dlvd..lb. .45 - —
2-Amino-2-methyl-1-propanol, cns., dms., works..lb. .60 - —
m-Aminophenol, dist., dms., ton lots. lb. 2.05 - —
smaller lots..lb. 2.50 - —
p-Aminophenol, dms., frt. alld..lb. .97 - .98
Aminophylline, USP, 100-lb. dms..lb. 3.55 - —
Ammonia, anhyd., fertilizer, tanks, works, frt. equald..ton.85.00 -88.00
pure cyls., extra, zone 1..lb. .18½- —
2..lb. .19 - —
3..lb. .19½- .20
4..lb. .20 - —
5..lb. .21 - —
refrigeration tanks, works, frt. equald..ton.87.50 -90.50

Alcohol, Ethyl, Absolute—Ammonium Sulfate

Ammonia, aqueous (29.4% NH_3), dms., c.l., dlvd. Metropolitan area..100 lbs. 3.60 - —
l.c.l., works..100 lbs. 4.00 - —
tanks, works, anhyd. basis. ton.96.00 - —
Ammoniac, sal, gray, bgs., c.l., works, frt. equald..100 lbs. 8.25 - —
l.c.l., same basis..100 lbs. 8.65 -11.15
white, gran. (see Ammonium chloride, tech.)
Ammoniacal liquor, tanks, works, anhyd basis..ton.96.00 - —
Ammonium acetate, purif., dms..lb. .38 - —
Benzoate, USP, dms., kgs., 4,000-lb. lots, frt. alld..lb. .80 - —
smaller lots, frt. alld..lb. .81 - 1.08
Biborate, gran., dms., c.l., works, ton.317.00 - —
ton lots, ex whse..ton.390.50 - —
smaller lots, ex whse..ton.395.50 - —
Bicarbonate, dom., dms., c.l., works..100 lbs. 6.50 - —
l.c.l., works..100 lbs. 7.50 - —
imp., dms., l.c.l..lb. .07¼- .08½
Bichromate, dms., works..lb. .42 - .43
Bifluoride, dms., dlvd..lb. .2145- .2245
Bromide, NF, gran., bbls..lb. .38 - .39
dms..lb. .39 - .42
Powdered ammonium bromide 10c. per lb. higher.
Carbonate, USP, lump, powd., dms..lb. .23 - .24
Chloride, tech., white, gran., bgs., c.l., works..100 lbs. 5.25 - —
l.c.l., works..100 lbs. 7.00 - —
USP, gran., bbls., dms..lb. .17¼- —
Citrate, dibasic, bbls..lb. .75 - —
dms..lb. .80 - .85
Dichromate (see Ammonium bichromate).
Fluoride (see Ammonium bifluoride).

Ammonium hydroxide (see Ammonia, aqueous).
Hypophosphite, NF, dms..lb. 3.07 - —
Iodide, NF, dms., bots..lb. 4.26 - 4.33
Linoleate, 80%, dms., works..lb. .50 - .53
Nitrate, dom., fertilizer grade, 33.5% N., bgs., western, works, frt. equald..ton.68.00 -70.00
with dolomite, 20.5% N., bgs., Hopewell, Va..ton.51.00 - —
imp., Canadian, 33.5% N, eastern, bgs., c.l., ship't point, frt. equal to $6 per ton.74.50 - —
western, bgs., c.l., f.o.b. cars, Los Angeles..ton.39.84 - —
Oxalate, fine gran., dms..lb. .26½- .31
Pentaborate, gran., dms., c.l., works..ton.227.00 - —
ton lots, ex whse..ton.300.50 - —
smaller lots, ex whse..ton.305.50 - —
Ammonium pentaborate powder, $10 per ton higher
Perchlorate, kgs., works..lb. .50 - .75
Persulfate, kgs..lb. .38 - —
Phosphate, coml., bgs., c.l., works, frt. equald..lb. .0863- —
l.c.l., same basis..lb .09 - —
dibasic, NF V bgs. dms..lb. .45 - —
tech., bgs., c.l. works, frt. equald..lb. .0863- —
l.c.l., same basis..lb. .0915- —
Salicylate, NF, dms., kgs..lb. 1.62 - 1.64
Silicofluoride dms works..lb. .11 - .13
Sulfamate, bbls., dms., works..lb. .18 - .20
Sulfate, coke-oven, bulk, producing ovens..ton.42.00 -47.50
syn., bgs., c.l., western, works. ton.44.00 - —
bulk, works..ton.42.00 - —
purif., dms., works..lb. .08½- .10



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ACIDS
Sulphuric Acid 60° 66° 98%
Electrolyte Acids—all strengths
Oleums 10% 20% 25% 65%
Muriatic Acid 20°
Nitric Acid 36° 38° 40° 42°
Phenol Sulphonic Acid
Acetic Acid
Pickling Acids
Inhibited Sulphuric, Muriatic Acids
Mixed Acids (Nitric-Sulphuric)

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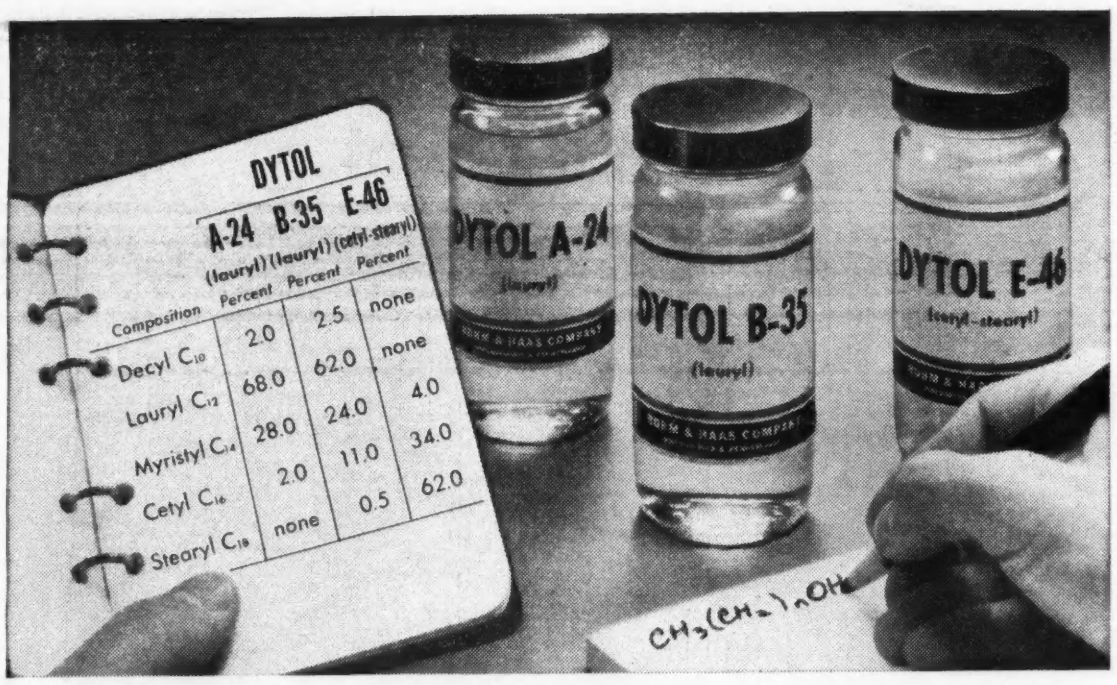
Cornwells Heights, Pa.—Orchard 3-2077

Ammonium Sulfide—Bismuth Metal

Ammonium sulfide, liq., 40-44%, dms., c.l., frt. equald., 100% basis ton 240.00 - —
l.c.l., works, 100% basis, ton 300.00 - —
tanks frt alld., 100% basis, ton 180.00 - —
Sulfocyanide, tech. (see Ammonium thiocyanate).
Thiocyanate, tech., dms., c.l., works lb. .20 - —
l.c.l., works lb. .22 - .26
Thioglycollate, comml., cbys., 100% basis lb. 1.60 - —
highly purif., cbys., 100% basis, lb. 1.70 - 1.96
Thiosulfate, cryst., photo grade, lib cms., frt alld lb. .65 - —
60% soln., dms., c.l., works lb. .03½- —
d-Ampnetamine hydrochloride dibasic, bots lb 28.00 - —
dl, dms lb 6.00 - —
d-monobasic, bots lb 28.00 - —
d-Phosphate, dibasic, bots lb. 6.00 - —
dl, cms lb 28.00 - —
d-Sulfate, dms lb. 6.00 - —
dl, dms lb. 6.00 - —
Amyl acetate, ex fusel oil, tech., frt. alld. E. of Rockies lb. .17 - —
l.c.l., same basis lb. .18 - —
tanks, same basis lb. .15 - —
ex pentane, reg., dms., c.l., dlvd. lb. .17 - —
l.c.l., same basis lb. .18 - —
tanks, same basis lb. .15 - —
tech., dms., c.l., dlvd. lb. .15 - —
l.c.l., same basis lb. .16 - —
tanks, same basis lb. .13 - —
Alcohol (see Alconol amyl).
n-Butyrate, dms lb. .90 - 1.25
Amyl cinnamic aldehyde, dms lb. 1.70 - 2.00
Nitrite, USP, bots lb. 1.75 - 1.83
Salicylate, cns., dms lb. .74 - 1.05
o-tert-Amyl phenol, dms., c.l., works, lb. .43¾- —
l.c.l., works lb. .46¾- —
tanks, works lb. .41¾- —
p-tert-Amyl phenol, dms., c.l., works, lb. .24¾- —
l.c.l., works lb. .25¾- —
tanks, works lb. .23¾- —
Anethole, NF, cns., dms lb. 1.25 - 1.55
tech., dms lb. .75 - 1.20
Angelica root, dom., bls lb. .60 - .70
Aniline oil, dms, c.l., works, frt. alld. lb. .21 - —
l.c.l., works, frt. alld lb. .22 - —
tanks, works, frt. alld lb. .20 - —
Salt, dms., frt. alld lb. .33 - —
c.l., truckloads, 20,000 lbs. min. lb. .24 - —
Anise, Mexican, bgs lb. .23 - .24
Spanish, bgs. lb. .33 - —
Syrian, bgs. lb. Nominal.
Anisic aldehyde, bots., dms lb. 1.80 - 2.70
o-Anisidine, dms., works lb. .88 - —
p-Anisidine, dms., works lb. .97 - —
Annatto seed whole, bgs. lb. .24 - —
powd., dms. lb. .28 - —
Anthracene, 90-95%, bbls., ton-lots, works lb. .70 - —
smaller lots, works lb. .95 - —
Anthraquinone, 99.5%, bbls., frt. alld lb. .88 - —
Antimony butter (see Antimony trichloride)
Metal, bulk, c.l., mines lb. .28½- —
cs., c.l., mines lb. .29 - —
Oxide, bgs., c.l., frt. alld lb. .29 - —
l.c.l., frt. alld lb. .30½- —
Antimony sulfide, approx. 60%, bgs. dlvd lb. .27 - .30
Trichloride, anhyd., pails, c.l., works lb. .38½- —
l.c.l., works lb. .40½- —
Antimony potassium tartrate, tech., gran. or powd., dms. lb. .59 - .62
USP, powd., dms. lb. .64 - .65
Antipyrine, NF, dms lb. 2.50 - 2.70
Apomorphine hydrochloride, USP, bots oz. 23.40 -23.90
Areca nuts, powd., bbls lb. .15 - .16
Arecoline hydrobromide, NF, bots, tins oz. 4.50 - 6.00
l-Arginine monohydrochloride, dms., 1-kilo lots kilo. 74.80 -83.00
Argols, min. 50%, bgs., shipt. ports per 100 kilos, 100% basis 25.00 - —
Arnica flowers (true montana), bls. lb. 2.50 Nom.
Arsenic metal, lump, bbls., prompt ship't lb. .60 - —
Trioxide, USP, dms lb. .48 - —
White, powd., bbls., c.l., dvld. lb. .05½- —
l.c.l., dlvd lb. .06½- .07½
Asafetida, cs. lb. .36 - .39
powd., bbls., dms lb. .50 - .53
Asbestine (see Talc, fibrous, N. Y.)
Asbestos, Canadian, crude, No. 1, c.l. (20 tons), mines ton. 1,300.00- —
No. 2, c.l. (20 tons), mines ton. 675.00 - —
Run-of-mine, c.l., (20 tons), mines ton. 556.00 - —
3K, c.l. (20 tons), mines ton. 436.00 - —
3R, c.l. (20 tons), mines ton. 371.00 - —
3T, c.l. (20 tons), mines ton. 348.00 - —
4Z, c.l. (20 tons), mines ton. 321.00 - —
4K, c.l. (20 tons), mines ton. 173.00 - —
4M, c.l. (20 tons), mines ton. 173.00 - —
4T, c.l. (20 tons), mines ton. 156.00 - —
4Z, c.l. (20 tons), mines ton. 156.00 - —
5D, c.l. (20 tons), mines ton. 122.50 - —
5K, c.l. (20 tons), mines ton. 122.50 - —
Asbestos, Canadian, crude, 5M, c.l., (20 tons) mines ton. 116.50 - —
5R, c.l. (20 tons), mines ton. 110.00 - —
6D, c.l. (30 tons), mines ton. 78.00 - —
7D, c.l. (30 tons), mines ton. 68.50 - —
7F, c.l., (30 tons), mines ton. 65.00 - —
7H, c.l. (30 tons), mines ton. 55.00 - —
7K, c.l. (30 tons), mines ton. 46.00 - —
7M, c.l., (30 tons), mines ton. 40.00 - —
7R, c.l. (30 tons), mines ton. 39.00 - —
7T, c.l. (30 tons), mines ton. 37.00 - —
7RF, c.l. (30 tons), mines ton. 40.00 - —
7TF, c.l. (30 tons), mines ton. 40.00 - —
7S, c.l., (30 tons), mines ton. 27.00 - —
Asbestos c.l. prices are in U. S. funds, l.c.l., lots, $4 per ton higher.
Asphalt, gilsonite, black, jet, bgs., c.l., mines ton. 37.00 - —
select, 350°F., fusing pt., bgs., c.l., mines ton. 38.00 - —
270°-295°F., fusing pt., bgs., c.l., mines ton. 37.00 - —
seconds, 300°-390°F fusing pt., bgs., c.l., mines ton. 32.00 - —
Manjak, No. 10, crude, dms., works lb. .06¼- —
Petroleum, cut-back, tanks, tankwagon, refy gal. .09 - —
emulsion, tanks, tankwagon, refy gal. .09½- .10
steam-refd., less than 80 penetration tanks, tankwagon refy ton. 21.00 - —
80-300 penetration, tanks, tankwagon, refy ton. 20.00 - —
Aspirin (see Acid, acetylsalicylic).
Atropine, USP, bots oz. 7.00 - —
Sulfate, USP, bots oz. 4.00 - —

B

Bacitracin, bulk, 1,000,000,000 or more units 50,000 units. .70 - —
less than 1,000,000,000 units 50,000 units. .75 - —
Balm of Gilead buds, dried, bgs lb. 1.35 - 1.45
Barberry root, bark, bags lb. .28 - .30
Barbital, USP, 100-lb. dms lb. 4.50 - —
Sodium, USP, dms lb. 4.75 - 4.77
Barium carbonate, precip., bgs., c.l., works ton. 92.50 - —
smaller lots works ton 102.50 - —
Chlorate kgs., works lb 32 - .36
Chloride, anhyd., bgs., c.l., works, ton. 158.00 - —
l.c.l. works ton. 162.00 - —
cryst., tech., dms., c.l., works 100 lbs. 6.00 - —
l.c.l., works 100 lbs. 6.50 - —
NF, cryst., dms lb. .18 - —
Chromate, bgs., frt. equald lb. .35 - —
Dioxide (see Barium peroxide).
Hydrate, cryst., bgs ton. 180.00 -190.00
Monoxide (see Oxide).
Nitrate, bbls., c.l., works lb. .12½- —
l.c.l., works lb. .14 - —
Oxide, grd., dms., c.l., frt. equald. ton. 255.00 - —
l.c.l. works ton. 265.00 - —
Peroxide, dms., works lb. .16 - —
Stearate, cns., c.l., frt. equd lb. .37 - —
l.c.l., same basis lb. .38 - .42
Sulfate, tech. (see Barytes and Blanc fixe).
X-ray, dms lb 14 - .14½
Sulfide, dms., c.l., works ton. 85.00 - —
l.c.l., works ton 95.00 - —
Barytes, Southern off-color, bgs., mines ton. 25.00 - —
95.75%, bgs., mines ton. 25.00 - —
water-grd., paper bgs., c.l., E. St. Louis ton. 41.60 - —
ex-whse., N. Y. ton. 60.10 - —
Bauxite, bulk, mines ton. 9.50 -10.00
Bay leaves (see Laurel leaves).
Belladonna leaf, bls lb. .35 - .37
root, bls lb. 45 - .50
Bentonite, dom., 200 mesh bgs., c.l., mines ton. 14.00 - —
imp., Italian, white, high gel., bgs., 5-ton lots, ex whse ton. 80.60 - —
1 ton-lots, ex whse ton. 83.10 - —
low gel, bgs., 5 ton-lots, ex whse ton. 78.95 - —
1 ton-lots, ex whse ton 81.45 - —
Benzal chloride, cbys., works lb. .22 - .23½
Benzaldehyde, NF, dms lb. .74 - 1.05
tech., cbys., dms lb. .44 - —
Benzene (see Benzol).
Hexachloride, 25% and 99% gamma isomer (see Lindane).
tech., bgs., dms., c.l., works, gamma unit-lb. .0075- .009
l.c.l., works, gamma unit-lb. .015 - —
wet dust, distributors, dms., c.l., dlvd., gamma unit-lb. .02 - —
l.c.l., dlvd., gamma unit-lb. .021 - —
Benzidine hydrochloride, bbls., frt. alld., 100% basis lb. 1.00 - —
Benzocaine, dms lb. 3.48 - 3.50
Benzol, pure or nitration, tanks, works
Bethlehem, Pa. gal. .40 - —
Birmingham district gal. .40 - —
Chicago district gal. .40 - —
Cleveland district gal. .40 - —
Geneva, Utah gal. .40 - —
Johnstown, Pa. gal. .40 - —
Lackawanna, N. Y. gal. .40 - —
Lone star, Texas gal. .40 - —
Lorain, Ohio gal. .40 - —
Minnequa, Colo gal. .39 - —
Philadelphia district gal. .40 - —
Pittsburgh district gal. .40 - —
Sparrows Point, Md. gal. .40 - —
Syracuse, N. Y. gal. .40 - —
Terre Haute, Ind. gal. .40 - —
Youngstown, Ohio gal. .40 - —
Benzophenone dms lb. 1.40 - 1.70
Benzonitrile, dms., c.l., works lb. .46¾- —
l.c.l., works lb. .47 - —
Benzotrichloride, cbys., frt. equald. lb. .18 - .20
Benzoyl chloride, cbys., dms., c.l., works, frt. equald. lb. .22 - —
l.c.l., same basis lb. .23 - —
tank trucks, dlvd. Metropolitan area lb. .20 - —
Peroxide, purif., fib. dms., 50-1,000-lb. lots, works lb. .98 - 1.08
Benzyl acetate, f.f.c., cns., dms lb. .62 - 1.04
Alcohol (see Alcohol, benzyl).
Benzoate, USP, f.f.c., cns., dms. lb. .62 - 1.10
Chloride, tech., cbys., dms., c.l., works, frt. equald. lb. .20½- .23½
l.c.l., same basis lb. .21½- .24½
High grade benzyl chloride, 2c. higher.
Cinnamate, cns. lb. 3.35 - 3.90
Formate, cns. lb 1.50 - 2.10
Isoeugenol, cns. lb. 8.60 - 9.10
Propionate, bots. lb. 1.35 - 1.65
Salicylate, bots. lb. 1.50 - 1.85
Benzylidine acetone, bots lb. 1.68 - 1.80
Chloride (see Benzal chloride).
Berberine bisulfate, cns. lb. 35.00 -36.25
Hydrochloride, bots lb. 35.00 -36.25
Betagammapicoline (see b.g-Picoline).
Betamethylnaphthalene (see b-Methylnaphthalene)
Betanaphthol (see b-Naphthol).
Betanaphthylamine (see b-Naphthylamine).
Betaphenylethylamine (see b-Phenylethylamine)
BHC (see Benzene hexachloride, technical).
Biotin cryst., bots gram. 10.00 - —
Biphenyl (see Diphenyl).
Bismuth chloride, jars lb. 5.11 - —
Hydroxide, dms. lb. 4.65 - —
Metal, bxs., ton lots lb. 2.25 - —



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☐ PRIMENE Amines ☐ Dimethylformamide
☐ PRIMINOX Polyethoxy Amines ☐ Methylamines
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City.....State.....

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Bismuth nitrate, cryst., dms. lb. 2.10 - 2.17
Oxide, anhyd., dms lb. 4.47 - 5.05
Oxychloride, dms lb. 4.37 - 4.42
Phenolsulfonate, fib. dms lb. 5.22 - —
Subcarbonate, USP, dms lb. 3.20 - —
Subgallate, NF, fib. dms lb. 3.15 - —
Subiodide, fib. dms. lb. 5.37 - —
Subnitrate, NF, dms lb. 2.65 - —
Subsalicylate, USP, dms lb. 3.59 - —
Bismuth-ammonium citrate, USP, powd., jars lb. 4.22 - —
Black, acetylene, bgs., c.l., works. lb. .17 - —
cs., l.c.l., shipt. point lb. .22½ - .26
Ash (see Barium sulfide).
Bone, dms. l.c.l., frt. alld. lb. .17 - .23¼
Pacific coast bone black prices, 2c per lb higher
Carbon, channel, pigment, high color, beads ctns., c.l., works. lb. .72 - —
l.c.l., dlvd. or whse. lb. .78 - —
medium color, uncompressed, bgs., c.l., works lb. .12 - —
l.c.l., dlvd or whse. lb. .19 - —
rubber, beads bulk, c.l., works lb. .07 - —
bgs., c.l., works lb. .074 - —
l.c.l., works lb. .1225- —
furnace, fast extruding, bgs., c.l., works lb. .06 - —
ctns., l.c.l., whse lb. .10 - —
high abrasion, bulk, c.l., works. lb. .0750- —
bgs., c.l., works lb. .0790- —
l.c.l., dlvd. or whse lb. .122 - .125
high modulus, bgs., c.l., works. lb. .0550- —
ctns., l.c.l., whse lb. .0930- —
semi-reinforcing bgs., c.l., works lb. .045 - —
bgs., cns., l.c.l., whse lb. .085 - —
Black, Charcoal (see C).
Dyes (see Dyes).
Graphite (see G).
Iron oxide, pure, bgs. c.l., works. lb. .12¾ - —
l.c.l., works lb. .13 - —
Lamp, bgs., c.l., works lb. .16 - .45
Mineral, bgs., works lb. .0160- .0675
Blackberry root bark, bls lb. .45 - —
Black haw root bark, bls lb. .65 - .70
tree bark, bls lb. .40 - .45
Blanc fixe, dry, byproduct, bgs., c.l., works ton.190.00 - —
l.c.l., works ton.200.00 - —
direct process, bgs., c.l., works. ton.100.00 - —
l.c.l., works ton.110.00 - —
N. Y. whse ton.140.88 -165.00
pulp, 70%, bbls., c.l., works. ton.105.00 - —
l.c.l., works ton 115 00 - —
Bleaching powder, dms., c.l., works. 100 lbs. 5.02 - —
l.c.l., works 100 lbs. 6 52 - —
blood, dried, 16-16½% ammonia, bgs. unit-ton. 8.00 - —
high-grade unground, 16-17% ammonia, bgs., Chicago. unit-ton. 7.75 - —
soluble, bgs., c.l. lb. .17 - .19
l.c.l. lb. .18 - .25
Bloodroot, bls lb. .60 .65
Blue alkali, dry, bbls., dlvd. N. or Tenn. and N C., & of Miss R. including St Paul Minneapolis, Davenport Rock Island, St Louis lb. 2.00 - —
toner, bbls. lithe flushed same basis lb. 1.15 - —
Chinese, bbls., same basis lb. .48 - —
Cobalt, genuine, bbls., same basis. lb. 4.90 - —
Imitation (see Blue ultramarine).
Dyes (see Dyes).
Iron (see Blue, Chinese, Milori, Potash, Prussian and Soda).
Methyl violet toner, molybdated, PMA, bbls., same basis lb. 2.60 - —
tungstated, PTMA, bbls., same basis lb. 3.35 - —
Milori, bbls., same basis lb. .48 - —
Peacock, fugitive, 100% color strength, bbls., same basis lb .75 - —
Phthalocyanine, full strength, bbls., same basis lb. 3.45 - —
resinated, bbls., same basis lb. 3.00 - —
water dispersable, bbls., same basis lb. 1.54 - —
Potash, CP, bbls. same basis lb. .56 - —
Prussian, insoluble, bbls., same basis lb. .48 - —
soluble, bbls., same basis lb. .48 - —
Soda, CP, bronze, bbls., same basis lb. .56 - —
Ultramarine, cobalt type, dry or pulp, bbls., same basis lb. .30½ - .35
jobbing types, bbls., same basis, lb. .16½ - .18½
reg. types, dry, bbls., same basis. lb. .22½ - .35
Victoria toner, molybdated, PMA, bbls lb. 4.10 - —
tungstated, PTMA, bbls lb. 5.00 - —
Blue dry colors, dlvd. prices ½c. higher Ala., Fla., Ga., La. (Shreveport 1¼c.), Miss., N. C., S. C., Tenn., Tex. (El Paso 2c.), Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph 1.6c. higher Pac. Coast, Denver, Pueblo, Salt Lake City, Wichita, frt. equalized with Chicago.
Blue vitrol (see Copper sulfate).
Bluestone (see Copper sulfate).
Bonemeal, steamed, works, E. ton.65.00 -68.00
Los Angeles ton.82.00 - —
Bone phosphate defluorinated (see D) of lime (see Calcium phosphate, tribasic).
precipatated (see Calcium phosphate tribasic, NF, precip.).
Borax, tech., anhyd., bgs., c.l., works. ton.78.00 - —
ton lots ex whse, N. Y. or Chicago ton.125.75 - —
bulk, c.l., works ton.70.00 - —
cryst., 99%, bgs., c.l., works. ton.67.25 - —
ton lots, ex-whse., N. Y. or Chi ton.115.00 - —
smaller lots, same basis, ton.120.00 - —
gran., decahydrate, 99½%, bgs., c.l., works ton.41.25 - —
ton lots, ex whse., N. Y. Chi ton.89.00 - —
smaller lots, same basis. ton.94.00 - —
bulk, c.l., works ton.35.75 - —
pentahydrate, 99½%, bgs., c.l., works ton.55.50 - —
ton lots, ex whse, N.Y., Chi ton.108.25 - —
smaller lots, same basis. ton.103.25 - —
powd., 99½%, bgs., c.l., works. ton.46.25 - —
ton lots, ex-whse., N. Y. or Chi. ton.94.00 - —
smaller lots, same basis. ton.99.00 - —
Borax packed in kgs., $45.50 per ton higher than in paper bgs.; in barrels, $24.50 higher. USP borax $15 per ton higher.
Bordeaux mixture, bgs., c.l., works, frt alld. or nearest whse. lb. .18 - .21
l.c.l., same basis lb. .19 - .25

Borneol, cns. lb. 2.50 - 4.50
Borontrifluoride gas, cyls., truckload, works lb. .62 - —
lots truckload, works lb. .70 - —
Brazilwood extract (see Hypernic extract)
Brimstone (see Sulfur).
Bromine, purif., cs., c.l., dlvd. E. of Rockies lb. .27 - —
l.c.l., up to 1,000-lb lots, same basis lb. .29 - —
dms. lead-lined, dlvd lb. .34 - —
Bromoform pharmaceutical grade, bots lb 1.62 2.60
cbys. lb. 1.52 - —
Bromstyrol, bots lb. 5.40 - 5.70
Bronze powder aluminum (See A).
Brown iron oxide, pure, bgs., c.l., works lb. .13¾ —
l.c.l., works lb. .14 —
Oxide, metallic, bgs, works lb. .04 —
Sienna, burnt, paper bgs., c.l., works lb. .04¼ - 15¼
l.c.l. works lb. 04½ 15½
raw paper ogs. c.l works lb. .04½ 13
l.c.l. works lb 04¾ 13¼
Umber, burnt, American, bgs., c.l., works lb. .06 —
l.c.l., works lb. .06¼ .07
Turkey type bgs c.l Boston Bethlehem Easton Pa., Hiwassee, Va. N Y lb. .06¾ —
l.c.l., works lb. .07 —
raw, American bgs works lb .06¼ 06¼
Turkey-type, bgs. works lb. .06¾ .07
Vandyke bbls works lb. .09½ 12
Brucine, cns., 100-oz. lots oz. .26 .25
Sulfate, NF, cns., 100-oz. lots oz. .15 - .20
Buchu leaves, bls lb. .50 - —
Butadiene, refd., cyls., refy. lb. .22 - —
tanks, refy lb. .15 - —

Butane, indust., tanks, group 3 gal. .03½ - —
N. Y. harbor gal. .08 - —
n-Butyl acetate, ferment., dms., c.l., frt. alld lb. .15 - —
l.c.l., same basis lb. .16 - —
tanks, same basis lb. .13 - —
n-synthetic, dms., c.l., dlvd. E. lb. .15 - —
l.c.l., same basis lb. .16 - —
tanks, same basis lb. .13 - —
sec-synthetic, dms., c.l., dlvd. E. lb. .12½ - —
l.c.l., same basis lb. .13¼ - —
tanks, same basis lb. .10¾ - —
Alcohol (see Alcohol n-Butyl).
Aldehyde (see Butyraldehyde).
Chloride, dms., c.l., works lb. .37½ - —
c.l. works lb. .38 —
n-Ether, dms., c.l., works lb. .31½ - —
l.c.l., works lb. .32 - —
tanks, works lb. .30 - —
Lactate dms., c.l. frt. alld. E. of Rockies lb. .35 - —
l.c.l., same basis lb. .36 - —
tanks, same basis lb 33 - —
Laurate, dms., works lb. .39 - —
Methacrylate normal dms. less truckloads works lb. 70 - —
Oleate, refd., dms., l.c.l., works. lb. .32 - —
Phenylacetate dms lb 4.50 4.60
Phthalate (see Dibutyl phthalate).
Stearate dms. l.c.l. frt equald lb. .24 - .27
Butylamine (see mono-di- and tri-).
6-tert-Butyl-m-cresol, dms., c.l., works lb. .49 - —
l.c.l., works lb. .50 - —
tanks, works lb. .48 - —
p-tert-Butylphenol, bgs., c.l., works. lb. .25½ - —
l.c.l., works lb. .26½ - —

Butyraldehyde, dms., c.l., dlvd lb. .21½ - —
l.c.l. dlvd lb. .22½ - —
tanks, dlvd lb. .19½ - —
Butyric ether (see Ethyl butyrate).

C

Cacao butter (see Cocoa butter)
Cadmium iodide, 25-lb. fib. dms lb. 6.75 - 7.05
Metal ingots or sticks, cs., dlvd. lb. 1.70 - —
Caffeine, nat., USP, cryst., dms., 100-lb. lots or more lb. 3.15 - —
anhyd., dms. lb. 3.35 - —
syn., anhyd., dms., 100-lb. lots or more lb. 3.35 - —
hydrous, dms., 100 lbs. or more lb. 3.15 - —
citrated, USP, dms., 100-lb. lots or more lb. 2.90 - —
Calamine, USP dms lb. .34 - —
Calciferol, cryst., vials, 1-kilo lots, works gram. .75 - —
25 to 100 gram lots, works. gram. .80 - .90
In edible oil (see Viosterol).
Calcium p-aminosalicylate, fib., dms., 1,000 lb. lots, frt. adjusted. lb. 7.00 - —
smaller lots, same basis lb. 7.05 - 7.50
Arsenate, dealers, dms., c.l., whse works, frt. alld. on 96 lbs or over lb. .09 - .10
l.c.l., same basis lb. .10 - —
Bromide, NF, jars lb. .90 - .97
Carbide, standard generator size, dms., c.l., dlvd ton.134.40 - —

BECCO® BRIEFS

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Manufacturers of insecticides, waxes, resins, plasticizers and stabilizers, pharmaceuticals, organic intermediates and other products are using HYDROGEN PEROXIDE and PERACETIC ACID increasingly for oxidation reactions, epoxidation, hydroxylation, ring-splitting reactions, quinone formation, and free radical reaction.

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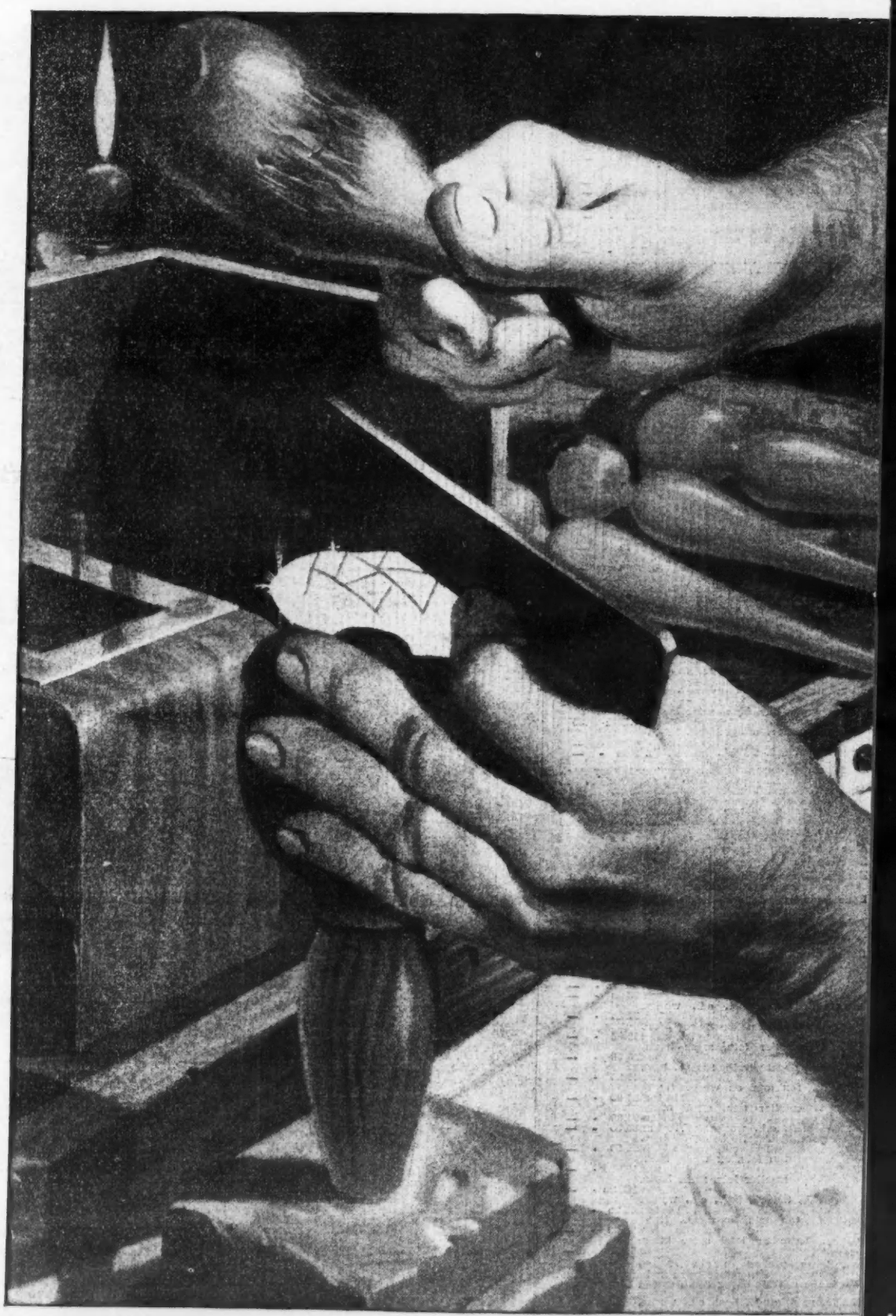
Calcium Carbonate—Chlorine

Calcium carbonate, nat., dry-grd., air floated, 325 mesh, bgs., c.l., works ton. 7.50 -10.00
chalk, whiting, 325 mesh, bgs., works ton 32.00 -34.00
water-grd., ½ to 0 microns, bgs c.l. works ton 36.00 - —
10 to 20 microns, bgs., c.l., works ton 17.00 -18.00
precip., dense, bgs., c.l., works, ton.30.00 -33.00
t.c.l., works ton 40.00 -45.00
medium, bgs., c.l., works ton.35.00 - —
t.c.l., works ton.45.00 -50.00
surface treated, bgs., c.l., works ton 35.00 -50.00
t.c.l., works ton.45.00 -65.00
ultrafine, bgs., c.l., works, ton 110.00 160.00
t.c.l., works ton 120.00 175.00
Chloride, cryst., purif., dms lb. 27 - —
flake, 77-80%, paper bgs., c.l., works, frt equald ton.27.00 - —
liquor, 40%, tanks, frt. equald, ton.11.35 - —
pellets, bgs., c.l., works ton.33.00 - —
powd., bgs., c.l., works ton.37.65 - —
solid, 73-75% dms. c.l., frt equald ton 25.50 - —
t.c.l. works same basis ton.34.00 -71.00
USP, gran., dms lb. 40 - —
Chromate bgs frt equald lb 29½ .30
Cyanide, dms., dlvd. E. of Rockies, lb. .24 - .50
Gluconate, AA bbls. dms lb. 70 .72
USP, bbls. dms lb. .53 - .65
Glycerophosphate, NF, fib. dms, lb. 2.30 - 2.45
Hydride, dms., works lb. 2.15 - 3.00
Hypochlorite, high test, cased (45 lbs.), dlvd. E. of Rockies cs.22.60 -24.75
dms., 100-lb. same basis dlv 28.65 -32.50
Hypophosphite, dms., ton lots or less lb. .90 - .93
Iodide, jars lb. 4.52 - —
Lactate, USP, dms., 10,000-lb. lots or more, works lb. .40 - —
smaller lots, works lb .41 .48
Mandelate, USP, dms., works lb. 2.10 - 2.25
Naphthenate, liq., 4%, Ca, cms., frt. equald lb. .27¼- —
Nitrate, fertilizer grade, bgs., c.l., Los Angeles ton.48.00 - —
tech., dms., works lb. .13 - —
d-Pantothenate, jars, 100-gram lots or more, frt. adjusted, gram .07½- —
Para-aminosalicylate (see Calcium p-Aminosalicylate).
Phenolsulfonate, dms lb. .70 - —
Phosphate, dibasic, USP, bgs., c.l., 100 lbs 7.10 - —
t.c.l 100 lbs 7.60 7.95
feed grade, 18½ to 21 units, bgs., c.l., works ton.74.00 -84.00
t.c.l., bgs., works ton.85.00 -95.00
monobasic, bgs., 10,000-lb. lots, works, frt. equald 100 lbs. 6.05 - —
smaller lots, same basis, 100 lbs. 6.55 - —
tribasic, precip., NF, bgs., c.l., works 100 lbs. 7.60 - —
t.c.l., works 100 lbs. 7.95 - —
Phytate bgs., works lb. .37 - —
Resinate, precip, dms., frt. alld., works lb. .30 - —
Silicate, hydrated, bgs., c.l., works lb. .06 - —
t.c.l., works lb. .06½- —
paint grade, fine, bgs., c.l., works ton.39.50 - —
t.c.l., ex whse ton.56.00 - —
medium, bgs., c.l., works, ton.27.00 - —
t.c.l., ex whse ton.44.00 - —
Stearate, ctns., c.l. lb. .35 - —
t.c.l. lb. .36 - .40
Sulfate (see Gypsum)
Calomel, USP, powd., dms lb. 5.42 - —
Camphene 46° m.p., dms., incl., c.l., works lb. .10½- —
t.c.l., same basis lb. .12 - .20
tanks, same basis lb. .08 - —
Chlorinated, 67-69% (see Toxaphene).
Camphor monobromated, NF, dms., bgs lb 3.00 3.12
nat., USP, powd., cs., 100-lb. lots, lb. .60 - .65
tablets, 1-oz., ½-oz. cs lb. .75 - .80
syn., tech., 1 bbl. or more lb. .52 - —
USP, gran., powd., bbls, 2,000-lb. lots lb. .59 - —
1,000-lb. lots lb. .60 - —
smaller lots lb. .61 - —
tablets, tins, 2,000-lb. lots lb. .85 - —
1,000-lb. lots lb. .86 - —
smaller lots lb .87 - —
Canada balsam (see Fir balsam)
Cantharides, Chinese, cs lb 2.00 2.05
powd. bxs. lb 2.25 2.30
Russian, bgs. lb 4.00 4.05
powd. bxs. lb 4.35 4.40
Capsicum (see Pepper, red).
Oleoresin NF from domestic pepper, dms lb 4.50 - 5.25
from African pepper, dms lb. 4.35 5.00
Caraway seed, Dutch, bgs lb. .18¾- —
Carbazole, 97%, bbls., ton lots, works lb. 1.05 - —
Carbinol, methyl isobutyl (see Methyl isobutyl-carbinol).
Carbon dioxide, indust., wholesale, bulk dlvd. metropolitan area, ton.73.00 -115.00
cyls., same basis lb. .08 - —
solid, same basis lb. .035 - .040
Disulfide, 55-gal. dms., c.l., works, frt. alld. to competitive points lb. .0750- —
t.c.l., same basis lb. .0850- —
5-gal. dms., c.l. same basis lb. .1025- —
t.c.l., same basis lb .1125- —
tanks, same basis lb. .0515- .0525
Tetrachloride, CP, dms., frt. alld. lb. .10½- .12¼
tech., consumers, dms., c.l., E. Rockies, frt. alld lb. .10 - —
W. of Rockies, f.o.b., stockpoints lb. .10½- —
t.c.l. E. of Rockies, frt. alld. alld lb. .11¾- —
W. of Rockies, f.o.b. stockpoints lb. .12¼- —
tanks E. of Rockies, frt. alld. lb. .085 - —
W. of Rockies, f.o.b. stockpoints lb. .09 - —
Carboxymethyl cellulose (see CMC).
Carbromal, NF, dms., 100-lb. lots, works lb 4.00 4.25
smaller lots, works lb 4.10 4.75
Cardamom fruit, selected, bleached, A, cs lb. 3.75 - —
B, cs. lb. 3.30 - —
decorticated, Alleppey, cs lb. 1.85 - —
Guatemalan, cs. lb. 1.90 - —
green, Alleppey, bgs lb 1.85 - —
Ceylon, bgs lb. 1.85 - —
seed (see Cardamom fruit decorticated).
Carmine, No. 40, NF, bulk, 100-lb. lots or more, dlvd lb. 7.80 - —
smaller lots, dlvd. lb. 7.95 - 8.45
Carotene, tech., 1,350,000 A units per gram, tins, works gram. .55 - —
in carrot oil, 5,000,000 to 8,000,000 A units per lb., dms., works, million units. .18 - —
Carotene, microcrystalline in oil, 400,000 A units per gram, tins, works million units. .33 - —
Carvol, bots. lb. 4.75 - 9.65
Cascara sagrada bark, bulk lb. .30 - .31
Casein, dom., acid precip., standard, bgs., 10,000-lb. lots or more, shipt. point lb. .27 - .30
premium, bgs., 10,000-lb. lots or more, shipt. point lb. .35 - .40
imp., Argentine, acid-precip., grd., 100-lb. lots or more, duty paid lb. .23¾- .24
Cashewnut shell liquid, treated, dms., c.l., Newark, N. J lb. .22 - —
ton lots, same basis lb. .23 - —
dm. lots, same basis lb. .25 - —
Cassia, Batavia, cuttings, bls lb. .16¾- .17
longstick, cracked, bls lb. .18½- .19
shortstick, cracked, bls lb. .17½- .17¾
Saigon, broken, bls. lb. Nominal
medium, reconditioned, bls lb. Nominal
thin, bls. lb. Nominal
Castor beans, bgs., f.o.b. Brazilian ports long ton.100.00 Nom.
Oil (see Oil, castor).
Pomace, bgs., c.l., works ton.30.00 Nom.
Castoreum, nat., cns lb. 5.00 -30.00
syn., cns lb. 9.00 - —
Catechol, CP, cryst., fib. dms., works lb. 2.17½- —
resub., dms., works lb. 4.29½- —
Catnip leaves, Southern, bls lb. 75 - —
Celery seed, French, bgs., shipt lb. .48 - —
Indian, bgs. lb. .15½- .16
Celluloid scrap (see Pyroxylin scrap).
Cellulose acetate, flake, powd., ctns., bgs., 100-lb. lots or more, dlvd. E lb. .35 - .46
Butyrate, powd., 17% butyryl content, bgs., dlvd. E lb. .545 - .555
27% butyryl content, ogs., dlvd. E lb. .595 - .605
38% butyryl content, bgs., dlvd. E lb. .545 - .555
50% butyryl content, bgs., dlvd. E lb. .585 - .595
half-second, bgs., dlvd. E lb. .545 - .555
Cerium hydrate, 74% CeO_2, t.o. dms., 100-lb lots or more lb. 1.44 - —
77% CeO_2, fib. dms., 100-lb. lots or more lb. 1.74 - —
Oxalate, NF, bbls., bgs., works lb. 1.05 - —
Oxide, optical grade, bgs., 50-lb. lots or more, works lb. 1.85 - 1.98
smaller lots, works lb. 2.03 - 2.23
Chalk (see Calcium carbonate).
Chamomile flowers, Hungarian style, cs lb. .75 - .80
Roman cs lb. 1.00 - 1.15
Charcoal, activated, NF, fib. dms., c.l., works lb. .25 - .32
5-ton lots, works lb. .26½- .32½
smaller lots, works lb. .27 - .50
Bone (see Black, bone).
Hardwood, briquets, bgs., c.l., works ton.77.00 -88.00
gran., bgs., works ton.77.00 - —
bulk, c.l., works ton.70.40 - —
Pinewood, gran., powd., bgs., c.l., works, South ton.55.00 - —
t.c.l., works, South ton.55.00 -65.00
lump bgs., c.l., works, South ton.51.50 - —
t.c.l., works, South ton.61.50 -69.00
bulk, c.l., works, South ton.36.00 - —
Chestnut extract, liq., 25% tannin, bbls., c.l., works lb. .04¾- —
t.c.l., works lb. .0510- —
tanks, works lb. .04 - —
Chestnut extract powd., 60% tannin, bgs., extra, c.l., works lb. .1032- —
t.c.l., works lb. .1102- —
Chloral, tech., 94% min., dms., c.l. works lb. .23 - —
t.c.l., works lb. .24 - —
tanks, works lb. .21 - —
Hydrate, USP, 40-lb. jars, 1,000-lb. lots lb. 1.30 - —
500-lb. lots lb. 1.33 - —
100-lb. lots or less lb. 1.35 - —
Chlordan, agricultural, dms., c.l., frt alld lb. .65 - —
t.c.l., 5,000 to 10,000 lb. lots, frt. alld lb. .66 - —
clarif., dms., c.l., frt. alld lb. .75 - —
t.c.l., 5,000 to 10,000 lb. lots, frt. alld lb. .76 - —
Chloramine T, NF, bbls., works lb. .75 - 1.00
Chlorinated paraffin, 42%, dms., c.l., frt. alld lb. .15½- —
t.c.l., same basis lb. .16½- —
70%, dms., c.l., same basis lb. .18 - —
t.c.l., same basis lb. .19 - —
Rubber, 5, 10, 20 cps., ctns., c.l., works lb. .55 - —
t.c.l., works lb. .56 - —
125, 1,000 cps., ctns., c.l., works lb. .65 - —
t.c.l., works lb. .66 - —
Chlorine, liq., cyls., c.l., works, frt. equald lb. .09½- —
t.c.l., Metropolitan area lb. .11 - .12¼
tanks, single units, works, frt. equald 100 lbs. 2.93 - —
multiple units, 5 cars, works, frt. equald 100 lbs. 3.80 - 3.83
3 cars, same basis 100 lbs. 3.80 - —
2 cars, same basis 100 lbs. 5.00 - —
1 car, same basis 100 lbs. 6.00 - —



4-Chloro-2-aminotoluene, fused, bbls. lb. 1.45 - —
m-Chloroaniline, dms., c.l., frt. equald lb. .75 - —
l.c.l., same basis lb. .80 - —
o-Chloroaniline, dms., c.l., works, frt. equald lb. .70 - —
l.c.l., same basis lb. .72 - —
p-Chloroaniline, dms., c.l., works, frt. equald lb. .75 - —
o-Chlorobenzaldehyde, dms., works. lb. 1.20 - —
p-Chlorobenzaldehyde, dms., works. lb. 1.33 - —
Chloroform, tech., dms., c.l., dlvd. lb. .18 - —
l.c.l., same basis lb. .19 - —
tanks, same basis lb. .17 - —
USP, dms lb. .30 - —
2-Chloro-4-nitroaniline, paste, 100% basis lb. .81 - —
4-Chloro-2-nitroaniline, dms., dlvd. lb. .80 - —
o-Chlorophenol, dms., c.l., frt. equald. lb. .34½- —
l.c.l., same basis lb. .35½- —
p-Chlorophenol, dms., c.l., frt. equald. lb. .34½- —
l.c.l., same basis lb. .35½- —
Chlorophyll, oil soluble, 4%, not fixed, pails, tins, works lb. 4.25 - —
copper fixed 6½% tins, pails, works lb 4.25 - —
Sodium-copper, aqueous soln., 4%, dms., pails, works lb. 3.75 - —
8%, pails, dms., works lb 4.00 - 4.80
14%, dms., works lb. 8.90 - —
conc., dom., 50%, dms., works, 100% basis lb.42.00 - —
75%, dms., works, 100% basis lb.45.00 - —
90%-100%, dms., works, 100% basis lb.45.00 - —

Chlorophyll, sodium-copper, conc., imp., 60%, tins, 100% basis. lb.58.00 - —
90%, tins, 100% basis lb.58.00 - —
75%, tins, 100% basis lb.58.00 - —
Chloropicrin, coml., bots. lb. 1.50 - —
cyls., 180 lbs frt alld lb .95 - —
100 lbs., same basis lb. .97 - —
25 lbs. same basis lb. 1.22 - —
Cholesterol, USP, fib. dms., 100-lb. lots lb. 6.85 - 9.50
Choline bitartrate, fib. dms., frt. adjusted lb. 1.50 - 1.75
Chloride fib. dms., frt. adjusted. lb. 1.50 - 1.75
Dihydrogen citrate, fib. dms., frt. adjusted lb. 1.50 - 1.75
Chromium acetate, soln., 7½%, bbls., works lb. .08½- —
cbys works lb. .10¼ —
Fluoride, bbls., works lb. .51 - .52
Green (see Green, chrome).
Oxide (see Green chromium oxide).
Trioxide NF, bags lb .82 .89
Yellow, (see Yellow chrome)
Cinchona bark, NF, red, broken, bgs lb. .35 .40
yellow, broken, bgs lb. .35 .40
Cinchonidine, cryst. cns. 100-oz. lots. oz. .65 —
Sulfate cns., 100-oz. lots oz. .37 - .40½
Cinchonine cryst. cns., 100-oz. lots. oz. .52 .57
Sulfate, NF, cns., 100-oz. lots oz. .27½- .30½
Cinchophen NF heavy density, dms. frt adjusted lb. 3.70 4.05
standard density, dms., same basis lb. 3.50 3.85
Cinchophen-sodium, dms., frt. adjusted lb 4.50 4.85
Cinnamic alcohol (see Alcohol cinnamic)
Cinnamon, Ceylon, No. 2 lb. .59 - .61
"0000," bgs., shipt lb. Nominal.

Citral, bots., cns lb. 6.05 - 6.20
Citronellal, bots., dms lb. 1.85 - 2.50
Citronellol bots., dms lb. 2.70 - 3.25
Civet, artif., bots lb.13.75 -15.00
nat., bots oz. 7.50 -15.00
Clay, ball, dom., airfloated, bgs., c.l., Tenn. ton.19.50 - —
crushed, shed moisture, bulk, c.l., Tenn ton.10.00 - —
purif., bgs., c.l., Tenn ton.20.50 - —
imp., airfloated, bgs., c.l., Atl. port long ton.42.00 -45.00
lump, bulk, Atl. port long ton.27.00 -30.20
Clay, China, dom., dry-grd., airfloat, 99%, 325 mesh, bgs., c.l., Georgia, works ton.10.00 - —
l.c.l., Georgia, works. ton.15.50 - —
300 mesh, bgs., c.l., Georgia, works ton.13.50 -14.50
l.c.l. ton.35.00 -36.00
imp., white, lump, bulk, c.l., ex dock, Phila., Portland, Me. gross ton.20.00 -35.00
powd., bgs., c.l., ex dock net ton 50 00 —
l.c.l., ex whse net ton.60.00 -65.00
Clove, Madagascar, bgs lb. .58 - —
Zanzibar, bls lb. .63 - —
CMC, purif., h gh vis. (see Gum Cellulose).
standard, low or med. vis., bgs., 23.000 lbs. or over, works, frt. alld lb. .55 - —
smaller lots, same basis lb. .57 - —
80% purity, low or med. vis., bgs., or fib. dms., 23.000 lbs., dlvd. E., 100% basis. lb. .39 - —
less than 23.000 lbs., dlvd. E., 100% basis lb. .41 - —

4-Chloro-2-Aminotoluene—Cubeb Berries

CMC, 65% purity, bgs., or fib. dms., c.l., dlvd. E., 100% basis, lb. .39 - —
l.c.l., dlvd. E., 100% basis. lb. .41 - —
CMC prices W. of the Rockies are 2c. per lb. lower, and are on a works basis.
Coaltar, crude, resale dms., c.l., ex-whse. gal. .275 - .30
l.c.l., ex-whse gal. .285 - .32
tanks ex works gal. .154 .165
refd., resale, dms., c.l., ex-whse. gal. .2850- .3125
l.c.l., ex-whse gal. .2950- .3245
tanks, ex whse gal. .1650- 1760
Cobalt acetate, 23.7%, bbls., dlvd.lb. 1.37 - 1.30
Carbonate, 46% pow'd., bgs., dlvd. lb. 2.15 - —
Chloride 24.2% Co. kgs., dlvd., lb. 1.20 - —
Hydrate, 60-61% Co. bbls., dlvd.lb. 2.72 - —
Linoleate, fused, 8½% Co., dms.lb. .75¾- —
liq., 6% Co., dms lb. .61 - —
Metal, 97-99% kgs., ex whse lb. 2.60 - —
Naphthenate, liq., 6% Co., dms., dlvd lb. .48¼- —
Nitrate, 20.1% Co, bbls., dlvd lb. 1.00 - —
Phosphate, powd., 32.1% Co., kgs., dlvd lb. 1.69 - —
Oxide, black, 72½ 73½% Co., kgs. lb. 1.96 - —
70-71% Co., kgs lb. 1.90 - —
Resinate fused, 3% Co., dms lb. .29¾- —
Sulfate, cryst. 21% Co., dms., dlvd lb. .89 - —
monohydrated 33% Co. dms. dlvd. lb. 1.40 - —
Tallate, 6% Co., dms., dlvd lb. .43¾- —
Cocaine, USP, cns., 100-oz. lots oz..17.80 - —
Hydrochloride, cns., 100-oz. lots.oz.13.75 - —
Cocillana bark, bgs lb. .40 - .50
Cocoa butter, bgs lb. .87 Nom.
Codeine, NF, cns., 100-oz. lots oz.13.25 - —
Hydrochloride, cns., 100-oz. lots oz.11.75 -
Phosphate, USP, cns., 100-oz. lots. oz.10.25 - —
Sulfate, USP, cns., 100-oz. lots oz.10.75 - —
Codliver oil (see Oil, codliver).
Cohosh root, black, bls lb. .20 - .22
blue, bls lb. .20 - .22
Colchicine, USP, bots., cns. oz.33.50 -40.00
Colchicum root, bls lb. .45 - .55
seed, bgs lb. .80 1.10
Collodion, USP, dms lb. .32½- —
flexible, USP, dms lb. .34 - —
Colocynth, pulp, bls lb. .25 - .30
Colombo root, bls lb. No prices.
Condurango bark, bales lb. .40 - .50
Copaiba balsam, cns., dms lb. .90 - 1.20
Copper acetate, bbls., c.l., works.lb. .40 - —
l.c.l., works lb. .41 - —
Carbonate, 55%, bgs., works lb. .253 - .273
Chloride anhyd., bbls., works lb. .39 - —
cryst., bbls., works lb. .28¼- —
Cyanide, tech., bbls., 1,000-lb. lots or more lb. .619 - —
smaller lots lb. .639 - —
Gluconate, cns., dms lb. 3.00 3.24
Hydrate, dms., frt. alld. E. Miss lb. .40¼- .40¾
Metal, electrolytic, dlvd., Valley basis lb. .30 - —
Naphthenate, liq., 8% Cu., dms., frt. alld lb. .23½- —
Nitrate, tech., cryst., bbls., works. lb. .33¼- —
Oleate, solid, 9% Cu., dms., works lb. .45 - —
Oxide, black, bbls., works lb. .39 - .44¼
red, USN type I, 97%, bbls., works lb. .48½- .58
type II, 90%, bbls., works lb. .41 - .46¼
Quinolinolate, fib. dms lb. 4.25 - 4.50
Resinate, precip., dms., frt. alld. lb. .30 - —
Sulfate, CP, gran., bbls., works lb. .1715- —
cryst., 99%, bgs., c.l., works. 100 lbs.10.35 .
l.c.l., works 100 lbs.10.60 -11.35
monohydrated 35% dms., c.l., works 100 lbs.17.10 -17.85
tribasic, dealers, bgs., c.l., works, frt. alld 100 lbs.22.50 . —
c.l., works 100 lbs.23.00 -2- 50
Undecylenate, dms lb. 2.90 3 00
Copperas (see Ferrous sulfate).
Copra, Atl., Gulf ports, c.i.f. ton.170.00 Nom.
Pacific ports, c.i.f ton.165.00 Nom.
Coriander seed, Moroccan, bgs. lb. .10½- —
Roumanian, bgs. lb. .08 - .08½
Corn sugar, tanners, chipped, paper bgs. c.l. 60,000 lbs. min. 100 lbs 7.31 - —
l.c.l. 100 lbs. 7.46 - —
Syrup, 42 dms. c.l. 100 lbs 7.32 - —
l.c.l. 100 lbs. 7.46 - —
Corrosive sublimate (see Mercuric Chloride).
Cortisone acetate, NNR, bulk gram. 3.75 - 4.00
Cottonseed meal, exp. 41%, sacked, Memphis ton.73.00 - —
solvent, same basis ton.65.00 Nom.
Coumarin, cryst., NF, dms lb. 3.10 - 3.20
Cramp bark, NF, bls lb. .85 .90
Cream of tartar (see Potassium bitartrate).
Creosote carbonate, NF, bots. cbys. lb. 3.05 - 3.26
Coaltar, crude, tanks, works, frt. adjusted gal. .22 —
soln., 80%, tanks, works gal. .2068- —
refd., dms., c.l., works gal. .3850- —
l.c.l. same basis gal. .4510- —
tanks, same basis gal. 2070 —
Wood, beechwood, cbys., dms lb. 1.60 - 1.65
hardwood, NF, bots., cbys lb. 1.30 - 1.35
pinewood, dms. works gal. .42½- .50½
Cresol, tech., 50% below 204°C., dry above 207 C., wide distillation range, non-ret. dms. c.l. frt equald lb. .133 - —
l.c.l. same basis lb. .136 - —
tanks, same basis lb. .12 - —
USP, non-ret. dms., c.l., same basis lb. .143 - —
l.c.l., same basis lb. .146 - —
ret. dms., c.l., same basis lb. .140 - —
l.c.l., same basis lb. .145 - —
tanks, same basis lb. .120 - —
m-Cresol, 95-98%, dms., c.l., works. lb. .60 - —
l.c.l., works lb. .61 - —
o-Cresol, m.p. over 30°C., ret. dms., c.l., frt. equald lb. .173 - —
l.c.l., same basis lb. .176 - —
tanks, same basis lb. .16 - —
29°C., ret. dms., c.l., frt. equald. lb. .16 - —
l.c.l., same basis lb. .16½- —
tanks, same basis lb. .15 - —
25-29°C., dms., c.l., frt. equald. lb. .153 - —
l.c.l., same basis lb. .156 - —
tanks, same basis lb. .14 - —
p-Cresol, 98%, dms., c.l., dlvd lb. .49 - —
l.c.l., dlvd lb. .51 - —
Methyl ether, cns lb. 1.90 - 2.50
Crotonaldehyde, 91-93%, dms., l.c.l., works lb. .24¼- .25
Cryolite, nat., indust., bgs., c.l., works 100 lbs.13.00 - —
l.c.l., works 100 lbs.14.25 - —
Insecticide, dealers, bgs., c.l., dlvd 100 lbs.14.00 - —
l.c.l., dlvd. 100 lbs.15.00 - —
Cube root, powd., 5% rotenone, bgs., works lb. .25 - —
Cubeb bersies, XX, NF, bgs lb. .50 - .52
powd., cs. lb. .65 - .70

reparation...

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For you, Canco's relentless effort to produce perfect containers means fewer work stoppages on your production lines, lower packing costs and maximum container efficiency throughout your channels of distribution.

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nco offers you the finest full line of paint, tty and turp cans available anywhere. Through e years Canco, in cooperation with your indus-, has helped you *sell* in all markets more iciently, more effectively.

Cumene—N,N-Dimethylaniline

Cumene, dms., c.l., works	lb.	.12	—
l.c.l. works	lb.	.14	—
tanks works	lb.	.11	—
Cumin seed, Iranian, bgs	lb.	.13¼	—
Moroccan, bgs.	lb.	.15	—
Turkish, bgs.	lb.	.13¼	—
Cutch extract, 55% tannin bgs., ex dock, duty extra	lb.	.08½	—
Cyanamide fertilizer mixing grades, 20.6% N, gran., bgs., Niagara Falls, Ont., contract	ton.	55.00	—
pulv., 21% N, bgs., works unit	ton.	2.75	—
indust. grade, bgs., c.l., works	ton.	75.00	—
l.c.l. bgs., works	ton.	96.00	—
6-16 mesh, dms., c.l., works	ton.	120.00	—
l.c.l. dms., works	ton.	140.00	—
Cyclohexane, tech., dms., c.l., works.	gal.	.70	—
l.c.l., works	gal.	.72	—
tanks works	gal.	.55	—
Cyclohexanol, tech., dms., c.l., works, frt. alld., E	lb.	.28½	.37¾
l.c.l., works, same basis	lb.	.30	.38¼
tanks, works, same basis	lb.	.27	.36¼
Cyclohexanone, tech., dms., c.l., works	lb.	.33½	—
tanks, works	lb.	.32	—
Cyclohexylamine, dms., c.l., works.	lb.	.46½	—
l.c.l., works	lb.	.47½	—
tanks, works	lb.	.45	—
l.c.l., works	lb.	.35	—
Cyclopropane, CP, 2-lb cyls., works.	cyl.	48.00	—
6 oz cyls., works	cyl.	12.00	—
USP, hospitals, cyls., 40-gal. lots.	gal.	.38	—
100-gal. lots	gal.	.37	—
200-gal. lots	gal.	.36	—

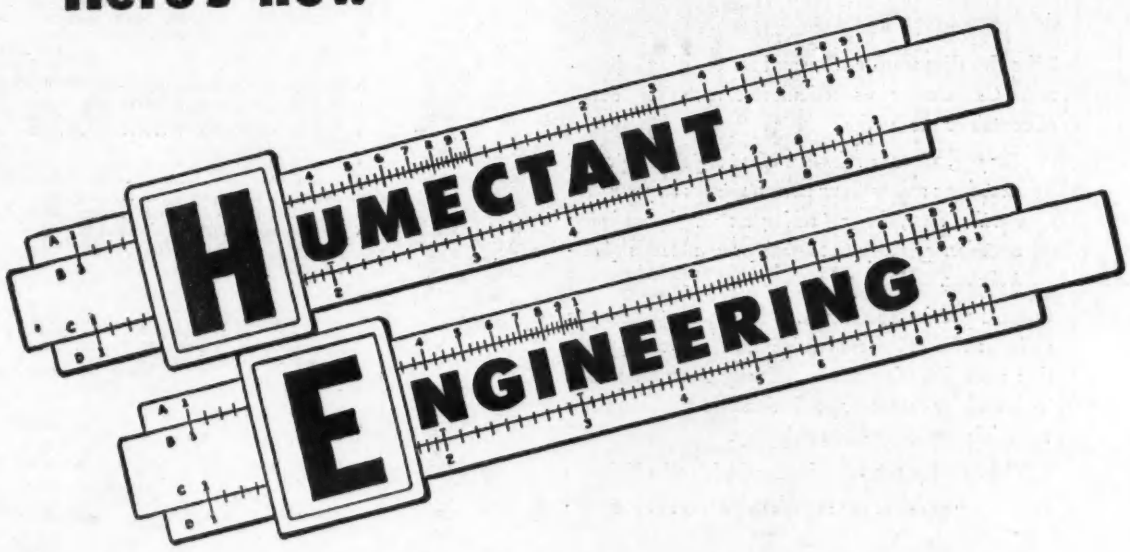
D

2-4-D, bbls., c.l., works, frt. equald.	lb.	.43½	—
l.c.l., same basis	lb.	.494	—
Butyl ester, dms., c.l., works	lb.	.46½	—
l.c.l., same basis	lb.	.51½	.56½
Isopropyl ester, dms., c.l., works.	lb.	.46½	—
l.c.l., works	lb.	.51½	.56½
Dandelion root, bls	lb.	.35	.40
DDD, tech., flake, grd., fib. bgs., c.l., works	lb.	.45	—
l.c.l., works	lb.	.46	—
DDT powder, bgs., c.l., works, frt. equald	lb.	.27	—
smaller lots, same basis	lb.	.29	—
fib. dms., c.l., same basis	lb.	.28	—
smaller lots, same basis	lb.	.30	—
1-Decanol, tech., dms., c.l., dlvd	lb.	.35	—
l.c.l., dlvd	lb.	.37	—
tanks, dlvd	lb.	.32½	—
Deertongue leaves, bls	lb.	.45	—
Defluorinated phosphate, 13% P, paper bgs., works	ton.	49.50	—
14½% P, paper bgs., works	ton.	48.00	—
17% P, paper bgs., works	ton.	56.00	—
18% P, paper bgs., works	ton.	64.35	—
Degras, common, bbls	lb.	.10	.12
neutral, less 2% ffa., bbls	lb.	.24	.25
over 2% ffa., bbls	lb.	.23	.24
Derris root, 5% rotenone powd., bbls	lb.	.26	Nora.
d-Desoxyephedrine hydrochloride bots	lb.	25.00	—
dl, bots.	lb.	6.50	—

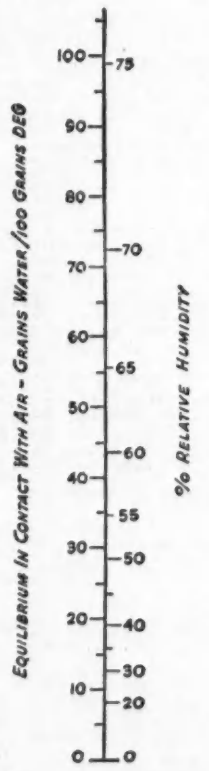
Dextrin, corn, gum, paper bgs., c.l.,	100 lbs.	8.95	—
l.c.l.	100 lbs	9.10	—
canary paper bgs. c.l.	100 lbs	8.69	—
l.c.l.	100 lbs	8.84	—
dark, paper bgs., c.l.	100 lbs	8.79	—
l.c.l.	100 lbs	8.94	—
white, paper bgs., c.l.	100 lbs.	8.53	—
l.c.l.	100 lbs	8.68	—
Corn dextrin in cotton bgs. 25c. per 100 lbs. higher.			
Potato bgs.	lb.	.10½	.11
Dextrose, USP, dms.	lb.	.17¾	—
Diacetone (see Alcohol, diacetone).			
Diacetyl, flavor grade, bots	lb.	4.50	5.50
Di-sec-amyl phenol, dms., c.l., works	lb.	.30¼	—
l.c.l., works	lb.	.33¼	—
tanks, works	lb.	.28¼	—
Di-tert-amyl phenol, dms., c.l., works	lb.	.30¼	—
l.c.l., works	lb.	.33¼	—
tanks, works	lb.	.28¼	—
o-Dianisidine fib. dms.	lb.	2.00	—
Dibenzyl sebacate, dms., c.l., works.	lb.	.89¾	.90
l.c.l., same basis	lb.	.90¼	.91
tanks, same basis	lb.	.88	—
p-Dibromobenzene, bgs., 500-lb. lots	lb.	.55	—
Dibutyl phthalate, dms., c.l., dlvd. E	lb.	.32	—
l.c.l., same basis	lb.	.33	—
tanks, same basis	lb.	.30	—
Sebacate, dms., c.l., works	lb.	.68	—
l.c.l., works	lb.	.68½	.69
tanks, works, dlvd	lb.	.66	.66½
Tartrate, dms., works, frt. alld	lb.	.64	.71
Dibutylamine, dms., c.l., dlvd	lb.	.55	—
l.c.l., same basis	lb.	.56	—
tanks, same basis	lb.	.53	—

Di-tert-butyl-p-cresol, dms., c.l., works	lb.	.91	—
l.c.l., works	lb.	.95	—
Dicapryl phthalate, dms., c.l., dlvd., works	lb.	.30½	.31½
l.c.l., same basis	lb.	.31½	.32½
tanks, same basis	lb.	.29½	—
Sebacate, dms., c.l., works	lb.	.63	.64
l.c.l., works	lb.	.63½	.64
tanks, works	lb.	.61	—
2,5-Dichloroaniline dms., works	lb.	.75	.83
o-Dichlorobenzene, dms., c.l., frt. alld. E	lb.	.12¼	—
l.c.l., same basis	lb.	.13¼	—
tanks, same basis	lb.	.10¾	—
p-Dichlorobenzene, dms., c.l., frt. alld. E	lb.	.16½	—
l.c.l., same basis	lb.	.19	—
Dichlorodiphenyltrichloroethane (see DDT).			
Dichloropentanes, dist., dms., c.l., works	lb.	.05	—
l.c.l., works	lb.	.05¾	—
tanks, works	lb.	.04¼	—
Dicyclohexylamine, dms., c.l., works.	lb.	.51	—
l.c.l., works	lb.	.51¾	—
tanks works	lb.	.49¾	—
Dicyclohexyl phthalate, fib. dms., c.l., frt. alld., works	lb.	.58¼	.59
l.c.l., same basis	lb.	.59¼	.60
Dieldrin, dms., frt. alld	lb.	1.80	—
l.c.l., frt. alld	lb.	1.85	—
Diethanolamine, dms., c.l., dlvd. E.	lb.	.23¼	—
l.c.l., same basis	lb.	.27¼	—
tanks, same basis	lb.	.24½	—
Diethyl carbonate, dms., c.l., frt. alld	lb.	.47	—
l.c.l., same basis	lb.	.48	—
tanks same basis	lb.	.45	—
Diethyl ethanolamines, dms., c.l., dlvd.	lb.	.67½	—
l.c.l., dlvd	lb.	.68½	—
tanks, dlvd	lb.	.65½	—
Oxalate, dms., c.l., frt. alld	lb.	.42	—
l.c.l., same basis	lb.	.43	—
tanks, same basis	lb.	.40	—
Phthalate, dms., c.l., dlvd	lb.	.27	—
l.c.l. dlvd.	lb.	.28	—
tanks, dlvd.	lb.	.25	—
Sulfate, dms., c.l., works	lb.	.18¾	—
l.c.l. works	lb.	.19¼	—
tanks works	lb.	.17	—
Diethylamine, dms., c.l., dlvd. E	lb.	.50½	—
l.c.l., same basis	lb.	.51½	—
tanks same basis	lb.	.48½	—
N,N-Diethylaniline, dms., c.l., frt. alld	lb.	.51	—
l.c.l. same basis	lb.	.52	—
tanks, same basis	lb.	.50	—
Di-2-ethylhexyl adipate (see Dioctyl adipate).			
Phthalate (see Dioctyl phthalate).			
Diethylene glycol, dms., c.l., dlvd. E.	lb.	.16½	—
l.c.l., same basis	lb.	.17½	—
tanks, same basis	lb.	.14¾	—
Boriborate, dms., l.c.l.	lb.	.31	—
Diethyl ether, dms., c.l., works.	lb.	.46¼	—
l.c.l., works	lb.	.47	—
Monobutyl ether, dms., c.l., works	lb.	.23¾	—
l.c.l., works	lb.	.29¼	—
tanks, works	lb.	.27	—
Acetate, dms., c.l., works	lb.	.30	—
l.c.l., works	lb.	.30½	—
tanks, dlvd. E	lb.	.28¼	—
Monoethyl ether, dms., c.l., dlvd.	lb.	.20¾	—
l.c.l., dlvd	lb.	.21½	—
tanks, dlvd	lb.	.19½	—
Acetate, dms., c.l., works	lb.	.26¾	—
l.c.l., works	lb.	.27¼	—
tanks, dlvd. E	lb.	.25¼	—
Monomethyl ether, dms., c.l., works	lb.	.20	—
l.c.l., works	lb.	.21	—
tanks, works	lb.	.18½	—
Diethylenetriamine dms., c.l., dlvd E.	lb.	.43	—
l.c.l., same basis	lb.	.44	—
tanks, same basis	lb.	.41½	—
Diethylstilbestrol, USP, bots., 10-kilo lots	kilo.	100.00	—
1-kilo lot	kilo.	110.00	—
Digitalis leaves, USP, dom., dms.,	lb.	.90	1.10
Digitoxin, USP, bots	gram.	5.50	6.00
Diglycol laurate, dms	lb.	.35	.38
Oleate, dms	lb.	.31	—
Stearate, dms	lb.	.26	.27
Dihexyl sebacate, dms., c.l., works	lb.	.64	—
l.c.l., works	lb.	.64½	.65
tanks, works	lb.	.62	—
Dihydrazine sulfate, dms., works.	lb.	1.10	1.25
Dihydrostreptomycin hydrochloride, bulk	gram.	.17	—
Sulfate, bulk	gram.	.17	—
2,2-Dihydroxy-5,5'-dichloro-diphenyl-methane, pure, dms	lb.	2.80	3.00
tech., dms	lb.	1.04	1.14
Di-isobutyl ketone, dms., c.l., dlvd.	lb.	.15½	—
l.c.l., dlvd	lb.	.16½	—
tanks, same basis	lb.	.13½	—
Phthalate, dms., c.l., dlvd. E	lb.	.31	—
l.c.l. same basis	lb.	.32	—
tanks, same basis	lb.	.29	—
Di-isobutylene dms., c.l., works	lb.	.10	—
l.c.l., works	lb.	.11	—
tanks, works	lb.	.08	—
Di-iso-octyl phthalate, dms., c.l., dlvd	lb.	.32½	—
l.c.l., same basis	lb.	.33½	—
tanks, same basis	lb.	.30½	—
Sebacate, dms., c.l., works,	lb.	.63	—
l.c.l., works	lb.	.63½	.64
tanks, works, dlvd	lb.	.61	.61¼
Di-isopropylamine, dms., c.l., dlvd. E, of Rockies	lb.	.50	—
l.c.l., same basis	lb.	.51	—
tanks, same basis	lb.	.48	—
Dillseed, dewhiskered, bgs.	lb.	.13	—
nat., bgs.	lb.	.12	—
Dimethyl anthranilate, cns	lb.	5.25	5.75
Chloroacetal, dms., c.l., works	lb.	.45	—
l.c.l., works	lb.	.50	—
tanks, works	lb.	.40	—
Ethanolamines, annyd., dms., c.l., dlvd.	lb.	1.43	—
l.c.l., dlvd	lb.	1.45	—
tanks, dlvd	lb.	1.40	—
70%, dms., c.l., dlvd., 100% basis	lb.	.53	—
tanks, dlvd., 100% basis	lb.	.53	—
Hydroquinone, dms	lb.	1.70	2.75
Phthalate, dms., c.l., works	lb.	.29½	—
	lb.	.29½	—
l.c.l., works	lb.	.30½	—
tanks, dlvd.	lb.	.27½	—
Sebacate, dms., c.l., works	lb.	1.27	—
l.c.l., works	lb.	1.28	—
tanks, works	lb.	1.25	—
Sulfate, 55-gal., ret. dms., c.l., works	lb.	.15	—
l.c.l., works	lb.	.16	—
10-gal. ret. dms., l.c.l., works.	lb.	.16½	—
Dimethylamine, 25% soln., dms., c.l., frt. equald	lb.	.42	—
l.c.l., frt. equald	lb.	.42½	—
tanks, frt. equald	lb.	.33	—
40% soln., dms., c.l., frt. equald	lb.	.39	—
l.c.l., frt. equald	lb.	.39½	—
tanks, frt. equald	lb.	.33	—
N,N-Dimethylaniline, dms., c.l., frt. alld	lb.	.29½	—
l.c.l., frt. alld	lb.	.30½	—
tanks, frt. alld	lb.	.28½	—

Here's how



cuts production costs



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N,N-Dimethylformamide dms., works. lb. .34 - .36
tanks, works lb. .33 - —
2,4-Dinitroaniline, dms., frt. equald lb. .57 - —
m-Dinitrobenzene, 85°C., dms lb. .20 - —
89°C., dms lb. .22 - —
2,4-Dinitrochlorobenzene, dms., c.l., frt. alld. E lb. .15¼ - —
l.c.l., frt. alld. E lb. .15¼ - —
tanks, frt. alld., E lb. .15 - —
2,4-Dinitrophenol, bbls. lb. .37 - —
2,4-Dinitrotoluene, oily, dms. lb. .10 - —
refd., 68°C., dms. lb. .21 - —
Dioctyl adipate, dms., c.l., works. lb. .45½ - —
l.c.l., works lb. .46½ - —
tanks, works lb. .43½ - —
Phthalate, dms., c.l., frt. alld. lb. .32½ - —
l.c.l., frt. alld. lb. .33½ - —
tanks, frt. alld. lb. .30½ - —
Sebacate, dms., c.l., works, lb. .63 - —
l.c.l., works lb. .63½ - .64
tanks, works, dlvd. lb. .61 - .61½
Di-o-tolyguanidine, dms., ton lots, dlvd. lb. .57 - —
smaller lots, dlvd lb. .58 - —
1,4-Dioxane, dms., c.l., works lb. .28¾ - —
c.l. dms basis lb. .29¼ - —
tanks same basis lb. .27 - —
Dip oil (see Tar acid oil).
Dipentaerythritol, bgs., l.c.l., works. .35 - —
Dipentene, dest-dist., dms., c.l., works gal. .48½ - —
l.c.l., works gal. .53½ - —
ex-whse. gal. .70 - —
steam-dist., dms., c.l., works, South. gal. .64 - —
dlvd. N. Y gal. .62 - —
tanks, works, South gal. .50 - —
Diphenyl, bbls., c.l., works lb. .15 - —
l.c.l. works lb. .16 - —
Diphenyl in bags ¼c. lower.
Oxide, perfume grade, cns lb. .54 - .61
Phthalate, dms., c.l., works lb. .51¾ - —
l.c.l., works lb. .53¾ - —
Diphenylguanidine dms., ton lots lb. .48 - —
smaller lots lb. .49 - .50
Diphenylhydantoin-sodium, USP, dms lb. 5.30 - 5.60
Dipropylene glycol, dms., c.l., frt. alld. lb. .16½ - —
l.c.l., same basis lb. .17½ - —
tanks, same basis lb. .14¾ - —
Monomethyl ether, dms., c.l., dlvd. E lb. .20 - —
l.c.l., same basis lb. .21 - —
tanks, same basis lb. .18½ - —
Divi-divi, 45% tannin, bgs., bls., c.l., U.S. ports, exdock ton. 70.00 - 72.00
Divinylbenzene, 20-25%, dms., c.l., works lb. .20 - —
l.c.l., works lb. .21 - —
tanks, works lb. .19 - —
40-50%, dms., c.l., works, 100% basis lb. 1.00 - —
l.c.l., works, 100% basis lb. 1.15 - —
Dodecylbenzene, dms., c.l., frt. equald lb. .14½ - —
l.c.l., same basis lb. .15½ - —
tanks, same basis lb. .12½ - —

Dyes, coaltar, certified colors for food, drugs and cosmetics, 5-lb. and 1-lb. lots dlvd:—
Blue, FD & C, No. 1, cns lb. 17.00 - 17.60
No. 2, cns lb. 17.00 - 17.60
Green, FD & C, No. 1, cns lb. 17.00 - 17.60
No. 2, cns lb. 22.20 - 22.85
No. 3, cns lb. 35.25 - 35.90
Orange, FD & C, No. 1, cns lb. 3.65 - 3.75
No. 2, cns lb. 4.65 - 4.75
Red, FD & C, No. 1, cns lb. 7.55 - 7.85
No. 2, cns lb. 4.00 - 4.10
No. 3, cns lb. 22.20 - 22.85
No. 4, cns lb. 7.20 - 7.50
No. 32, cns lb. 5.30 - 5.40
Violet, FD & C, No. 1, cns lb. 17.00 - 17.60
Yellow, FD & C, No. 1, cns lb. 10.50 - 11.05
No. 3, cns lb. 3.30 - 3.40
No. 4, cns lb. 3.30 - 3.40
No. 5, cns lb. 4.00 - 4.10
No. 6, cns lb. 4.00 - 4.10

Dyes, coaltar, certified colors for drugs and cosmetics, 1-lb. lots, works, 25-50 lb. lots, dlvd:—
Black, D&C, No. 1, cns lb. 10.95 - —
Brown, D&C, No. 1, cns lb. 16.10 - —
Green, D&C, No. 5, cns lb. 16.10 - —
No. 6, cns lb. 16.10 - —
No. 7, cns lb. 14.80 - —
Orange, D&C, No. 3, cns lb. 10.95 - —
No. 4, cns lb. 20.05 - —
No. 5, cns lb. 5.70 - —
No. 10, cns lb. 20.70 - —
Red, D&C, No. 8, cns lb. 2.85 - —
No. 9, cns lb. 2.85 - —
No. 10, cns lb. 2.30 - —
No. 11, cns lb. 1.85 - —
No. 12, cns lb. 2.65 - —
No. 17, cns lb. 10.95 - —
No. 18, cns lb. 24.00 - —
No. 19, cns lb. 15.45 - —
No. 21, cns lb. 3.60 - —
No. 22, cns lb. 10.95 - —
No. 28, cns lb. 24.65 - —
No. 33, cns lb. 17.45 - —
Violet, D&C, No. 2, cns lb. 16.10 - —
Yellow, D&C, No. 7, cns lb. 10.95 - —
No. 10, cns lb. 13.50 - —
No. 11, cns lb. 13.50 - —

Dyes, coaltar, certified colors for drugs and cosmetics, external use, 1-lb. lots, works, 25-50 lb. lots, dlvd:—
Blue, Ext., D&C, No. 1, cns lb. 16.10 - —
Green, Ext., D&C, No. 1, cns lb. 16.10 - —
Red, Ext., D&C, No. 1, cns lb. 13.50 - —
Yellow, Ext., D&C, No. 1, cns lb. 10.95 - —

Dyes, coaltar, for general use in cloth dyeing (numbers are those of the Colour Index scale or prototype), contract, dlvd. No.
20 Chrysoidine Y lb. .74 - —
27 Fast light orange 2G lb. .90 - —
31 Phloxine 2G lb. .74 - —
36 Yellow 2G lb. .83 - —
40 Orange R extra, conc lb. 1.06 - —
57 Fuchsine 6B lb. 1.08 - —
79 Scarlet 2R lb. .81 - —
151 Orange AD lb. .55 - —
161 Orange RR lb. .66 - —
176 Fast red A lb. .99 - —
179 Rubine XX, conc lb. 1.14 - —
180 Blue F4B lb. .92 - —
185 Brilliant scarlet 3RN, conc. lb. .93 - —
202 Chrome blue black, conc. lb. .75 - —
203 Chrome black T lb. .78 - —
208 Fast blue SR lb. .91 - —
216 Chrome red B lb. .84 - —
234 Brown Y lb. .96 - —
246 Blue black, extra, conc. lb. .95 - —
275 Milling red 3R, conc lb. 2.03 - —
289 Navy blue 3R, conc lb. 1.19 - —
299 Black F, conc lb. 1.54 - —
304 Neutral black 2B, conc., 200% lb. 2.01 - —
326 Fast scarlet 4BNC lb. 1.64 - —
332 Bismarck brown RX, conc. lb. .95 - —
365 Brilliant yellow, conc lb. 2.57 - —
382 Scarlet B lb. 1.82 - —
401 Diazo black BHD lb. .69 - —
406 Blue 2B, extra conc lb. 1.07 - —
419 Red FC, conc lb. 1.12 - —
420 Brown M lb. 98 - —
448 Red 4BX, conc lb. 1.30 - —

Dyes, coaltar, for general use in cloth dyeing (numbers are those of the Colour Index scale or prototype), contract, dlvd. No.
518 Diamine sky blue FF, extra, conc. lb. 1.50 - —
561 Brown B lb. 2.03 - —
581 Direct black EB lb. .94 - —
593 Green BY, conc lb. .72 - —
596 Yellow Brown K, extra lb. .91 - —
620 Yellow 2G lb. 1.79 - —
640 Yellow XX lb. 1.61 - —
655 Yellow OX lb. 2.04 - —
657 Green V lb. 2.10 - —
662 Brilliant green G lb. 2.79 - —
667 Brilliant milling green 6B, conc. lb. 3.68 - —
671 Blue EG lb. 1.70 - —
681 Crystal violet powder lb. 2.15 - —
698 Violet 4BXN lb. 1.74 - —
720 Brilliant blue BBG lb. 1.88 - —
729 Blue B, conc lb. 2.79 - —
749 Red BX lb. 4.33 - —
814 Yellow NN, conc lb. 3.11 - —
841 Safranine GF, extra, conc., lb. 3.17 - —
865 Nigrosine WSJ lb. .75 - —
922 Blue GXX lb. 1.71 - —
978 Black GXCF, conc lb. .32 - —
1034 Alizarine red SC lb. 2.59 - —
1054 Alizarine blue SAPX lb. 2.91 - —
1078 Ailzarine green CG, extra. lb. 2.72 - —
1085 Alizarine blue, black, B lb. 2.33 - —
1096 Golden orange GFD, single paste lb. 1.99 - —
1099 Dark blue BO, single paste. lb. 1.75 - —
1101 Jade green N, double paste. lb. 1.98 - —
1106 Blue RS, double paste lb. 2.96 - —
1113 Blue BLFD, double paste lb. 2.25 - —
1150 Olive R, single paste lb. 1.10 - —
1151 Brown R, single paste lb. 1.76 - —

Dyes, coaltar for general use in cloth dyeing (numbers are those of the Colour Index scale or prototype) contract, dlvd. No.
1171 Indigo, synthetic, 20% paste lb. .31 - —
1217 Orange RD, single paste lb. 1.65 - —
p-4 Brown PG lb. 2.30 - —
p-24 Gray L lb. 1.60 - —
p-14 Brown EB lb. 1.51 - —
p-80 Diazo brilliant scarlet ROAD lb. 2.79 - —
p-202 Diazo black VJ, conc lb. 1.74 - —
p-244 Brilliant scarlet BN lb. 1.31 - —
p-313 Naphthol SWF lb. 2.42 - —

Dyes, coaltar, for stains, oil-soluble, 100-lb. dms., sellers' works.
Black blue No. 530 lb. .81 - —
Jet No. 531 lb. .89 - —
Brown R, conc lb. 1.72 - —
Orange R, brilliant lb. .90 - —
Red 4B, conc lb. 1.37 - —
Yellow C lb. 1.18 - —
FN, conc lb. 1.22 - —

Dyes, coaltar, for stains, spirit-soluble, 100-lb. dms., sellers' works:—
Auramine O lb. 1.85 - —
Black, basic blue lb. 1.21 - —
Jet lb. 1.21 - —
Blue, methylene, 2 B, conc lb. 1.71 - —
Brown Bismarck R, conc lb. .86 - —
Chrysoidine, R, extra lb. .60 - —
Y, extra lb. .64 - —
Fuchsine, conc lb. 3.08 - —
Green, malachite, conc lb. 2.10 - —
Rhodamine, B lb. 4.33 - —
Safranine, Y, conc lb. 2.90 - —
Violet, methyl, B lb. 1.10 - —

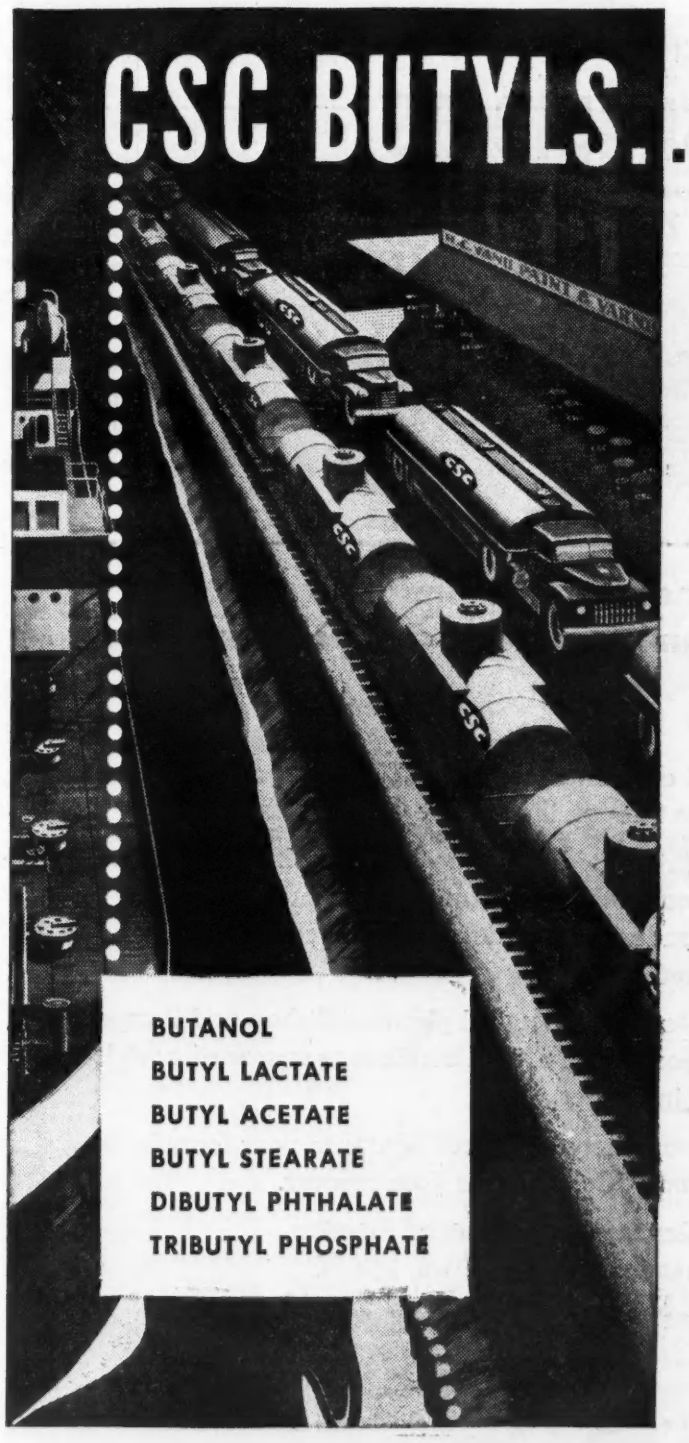
N,N-Dimethylformamide—Epsom Salt

Dyes, coaltar, for stains, water-soluble, 100-lb. dms., sellers' works:—
Azo rubine R, extra conc lb. 1.04 - —
Black, acid blue, B, extra lb. .86 - —
Fast light, 3 G, extra lb. 2.04 - —
Methanil, conc lb. .91 - —
Orange acid, Y, conc lb. .47 - —
Scarlet croceine, MOO lb. 1.45 - —
Yellow, azo, conc lb. .90 - —

Oil-soluble, spirit-soluble, water-soluble dyes in kegs, 3c. higher; tins, 10c. higher.

E

Echinacea root, bls lb. 1.10 - —
Egg albumin (see Albumin),
Yolk, dried, dom., bbls lb. 1.04 - 1.06
tanners, bbls lb. 06 - .06½
Elder flowers, bright, bls lb. .35 - .40
Elm bark, grinding, bls lb. .30 - .32
powd., bbls., bxs lb. .45 - —
select, bundles lb. .65 - —
Emetine hydrochloride, USP, bots oz. 32.95 - 35.00
Ephedrine, syn., USP, anhyd., bots., 100-oz. lots oz. .98 - 1.00
hydrous, bots., 100-oz. lots oz. .92 - —
Hydrochloride, tins, 100-oz. lots. oz. .75 - —
Sulfate, cryst., tins, 100-oz. lots. oz. .72 - —
powd., tins, 100-oz. lots oz. .73 - —
Epichlorohydrin, dms., c.l., dlvd lb. .39 - —
l.c.l., dlvd lb. .40 - —
tanks, dlvd lb. .37 - —
Epsom salt (see Magnesium sulfate).



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Pentaerythritol

COMMERCIAL SOLVENTS
260 MADISON AVENUE NEW YORK, N.Y.
CSC INDUSTRIAL CHEMICALS

Epinephrine—Glue, Bone, Packers'

Epinephrine, syn., USP, bots., 100-gram lots gram .45 - .55
Ergosterol, unirradiated, cryst. kilo 150.00 - —
Ergot, NF, dms., tin-lined lb. 3.00 - —
Eserine salicylate, bots. oz. 29.75 - 32.50
Sulfate, bots. oz. 34.50 - 35.61
Ether (see specific product).
Ethyl acetate, nat. ferment., 85-88%, dms., c.l., frt. alld lb. .13 - —
l.c.l., frt. alld lb. .14 - —
tanks, frt. alld lb. .11 - —
95-96%, dms., c.l., frt. alld. lb. .13¼ - —
l.c.l., frt. alld. lb. .14¼ - —
tanks frt alld lb. .11¼ - —
99%, dms., c.l., frt. alld. lb. .13½ - —
l.c.l., frt. alld. lb. .14½ - —
tanks, frt. alld. lb. .11½ - —
syn., 85-98% dms., c.l., dlvd. lb. .13 - —
l.c.l., dlvd. lb. .14 - —
tanks, dlvd lb. .11 - —
95-98%, dms., c.l., dlvd. lb. .13¼ - —
l.c.l., dlvd. lb. .14¼ - —
tanks, dlvd lb. .11¼ - —
99%, dms., c.l., dlvd. lb. .13½ - —
l.c.l., dlvd. lb. .14½ - —
tanks dlvd lb. .11½ - —
Acetoacetate, dms., c.l., dlvd. lb. .55 - —
l.c.l., dlvd lb. .56½ - —
Acrylate, dms., c.l., and truck load, works lb. .44½ - —
less than truckload, works lb. .45½ - —
tanks, works lb. .42¾ - —
Aminobenzoate, USP (see Benzocaine).
Bromide, tech., 98%, dms., c.l. lb. .41 - —
l.c.l. lb. .43 - —
Ethyl butyl ketone, dms., c.l., works lb. .35½ - —
l.c.l., works lb. .36 - —
tanks, works lb. .34 - —
Butyrate, works lb. .80 - 1.02
Carbamate (see Urethane).
Cellulose, vis. 7 cps., bgs., 5,000-lb. lots or more, works lb. .70 - —
smaller lots, works lb. .72 - .80
vis., 10, 20, 50, 100, 150 cps., bgs., 2,000-lb. lots or more, works lb. .65 - .70
smaller lots, works lb. .67 - .81
Chloride, tech., cyl., c.l., works lb. .20 - .22
dms., c.l. same basis lb. .18 - .20
tanks same basis lb. 10 —
USP, bots., cyls lb. 22 - .24
Cinnamate, cns. lb. 2.71 - 3.45
Ethanolamine, mixed, dms., c.l., frt. alld., E. Miss lb. .42½ - —
l.c.l., same basis lb. .43½ - —
tanks, same basis lb. .40½ - —
Ether, absolute, ACS, dms lb. .37 - —
anesthesia, UPS, hospitals, 1-lb. cns lb. .89 - —
½-lb. cns lb. .97 - —
¼-lb. cns lb. 1.05 - —
solvent, USP, dms., c.l., dlvd lb. .15¾ - —
l.c.l., dlvd lb. .16¾ - —
tanks, dlvd lb. .13¾ - —
syn., dms., c.l., dlvd. E lb. .12 - —
l.c.l., dlvd. E lb. .13 - —
tanks, dlvd. E lb. .10 - —
Gallate, dms., 100 to 2,000-lb. lots lb. 3.90 - 4.40
Iodide, cbys., works lb. 3.30 - —
Methacrylate, dms., c.l., and less than truckload, works lb. .51½ - .52
Morphine hydrochloride, USP, bots. oz. 11.85 - —
Nitrite (see Nitrous ether).
Ethyl oenanthate, dms. lb. 1.00 - 1.50
Oleate, dms., l.c.l., works lb. No prices.
Oxalate (see Diethyl oxalate).
Silicate dist. (see Tetraethylorthosilicate).
40% available SiO_2, dms., dlvd. lb. .53½ - —
N-Ethyl-a-naphthylamine, dms., works, lb. 1.02 - —
N-Ethyl-o-toluidine, bbls lb. .88 - —
Ethylamine (see Mono, Di- or Tri-)
N-Ethylaniline, dms., c.l., frt. alld. lb. .51 - —
l.c.l., frt. alld lb. .52 - —
tanks, frt. alld lb. .50 - —
Ethylbenzene, 99%, dms., c.l. lb. .19½ - .20¼
l.c.l. lb. .20½ - .21¼
tanks lb. .18½ - —
Ethylene dichloride, dms., c.l., dlvd lb. .10¼ - —
l.c.l., same basis lb. .12¼ - —
tanks, same basis lb. .09 - —
Ethylene dichloride prices W. of Rockies 1c per lb higher.
Glycol, dms., c.l., dlvd. E lb. .14¾ - —
l.c.l., same basis lb. .15¾ - —
tanks, same basis lb. .13 - —
Monobutyl ether, dms., c.l., dlvd. E lb. .20 - —
l.c.l., dlvd E lb. .21 - —
tanks, dlvd E lb. .18½ - —
Monoethyl ether, dms., c.l., dlvd. E lb. .20 - —
l.c.l., dlvd. E lb. .21 - —
tanks, dlvd E lb. .18½ - —
Acetate, dms., c.l., dlvd. E lb. .18½ - —
l.c.l., dlvd E lb. .19½ - —
tanks, dlvd. E lb. .16½ - —
Monomethyl ether, dms., c.l., dlvd. E lb. .20 - —
l.c.l., dlvd. E lb. .21 - —
tanks, dlvd. E lb. .18¼ - —
Ethylene monomethyl acetate, dms., c.l., dlvd. E lb. .28¾ - —
l.c.l., dlvd. E lb. .29¼ - —
tanks, dlvd. E lb. .27 - —
Monostearate, triple pressed, dms lb. .34 - —
Oxide, dms., c.l., dlvd. E lb. .21 - —
l.c.l., dlvd. E lb. .24 - —
tanks, dlvd. E lb. .15 - —
Trichloride (see Trichloroethane).
Ethylenediamine 85-88%, dms., c.l., dlvd. E., 100% basis lb. .46 - —
l.c.l., dlvd. E., 100% basis lb. .47 - —
tanks, dlvd. E., 100% basis lb. .44 - —
Ethylvanillin, cns., 25-lb. lots lb. 6.75 - 7.30
smaller lots lb. 7.35 - 7.40
Eucalyptol, USP, cns., dms. lb. 1.40 - 1.50
Eugenol, USP, bots. lb. 2.70 - 3.55
Euphorbia herb, bls. lb. .15 - .17

F

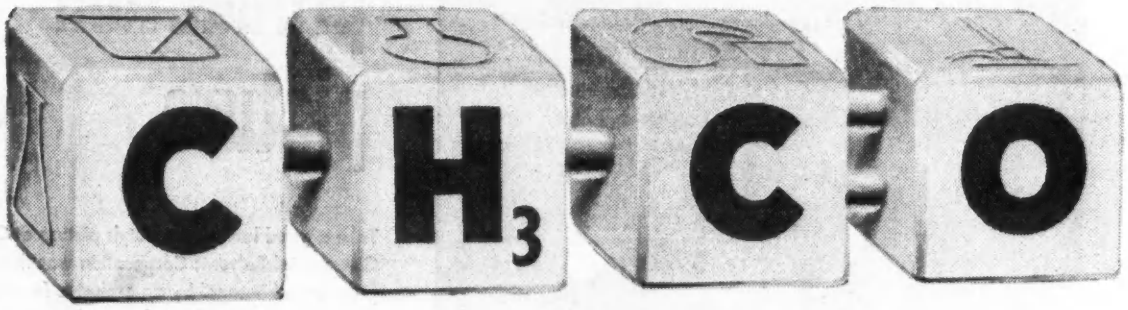
Feldspar, 140-200 mesh, bulk, c.l., works ton. 19.50 - —
Feldspar in bags $3 per ton higher.
Fennel seed, Argentine, bgs. lb. .11½ - —
Czech, medium, bgs. lb. .11½ - —
Indian, light, bgs. lb. .11½ - —
Fenugreek seed, Moroccan, bgs. lb. .07½ - —
Ferric acetate, liquor, 28°, bbls., c.l., works lb. .09 - —
l.c.l., works lb. .09¾ - —
soln., USP IX, cbys. lb. .16 - —
djns. lb. .17 - —
Cacodylate, NF, bots. lb. 13.00 - 14.00
Chloride, anhyd., tech., dms., c.l., works 100 lbs. 6.75 - —
l.c.l., works 100 lbs. 8.00 - —
indust., cryst., bbls., c.l., works. 100 lbs. 4.75 - 5.25
l.c.l., works 100 lbs. 5.75 - 6.25
42° Be, cbys., c.l., works. 100 lbs. 7.25 - 8.25
tanks, frt. equald., 100% basis 100 lbs. 3.25 - —
USP, cryst., dms., works lb. .07½ - .09
Citrate, gran., dms lb. .86 - —
Glycerophosphate, NF, powd lb. 4.75 - 4.85
Hydrophosphite, NF, dms lb. 3.45 - —
Naphthenate liq., 6% Fe., dms., frt. alld lb. .25¾ - —
Oxalate, gran., dms lb. .85 - .87
Phosphate, NF, soluble, gran., pearls c. lb. .64 - .65
Pyrophosphate, NF VII, soluble, gran., pearls, dms lb. .78 - .81
Resinate, 6¾% Fe, dms., frt. alld. lb. .29 - —
Stearate, dms., c.l., frt. alld lb. .37 - —
l.c.l., frt. alld. lb. .38 - .42
Sulfate, partially hydrated, bgs., c.l., works ton. 31.75 - 33.75
l.c.l., works ton. 34.75 - 40.75
Ferric-ammonium citrate, brown, NF, gran., dms lb. .59 - —
green, USP XII, gran., dms lb. .59 - —
Oxalate, fine gran., dms lb. .25½ - .28⅛
Ferric-potassium, oxalate, fine gran., dms lb. .30½ - .33⅛
Ferric-sodium oxalate, fine gran., dms lb. .25½ - .28⅛
Ferrous gluconate, NF, dms lb. .88 - —
Sulfate, gran., bgs., c.l., works. ton. 34.50 - —
l.c.l., dlvd. Metropolitan area 100 lbs. 3.35 - 4.25
bbls., c.l., works ton. 10.00 - —
bulk, c.l., works ton. 27.00 - —
USP, cryst., bbls., dms lb. .09½ - .10
Fir balsam, Canada, cns gal. 34.00 - 35.00
Oregon, bbls gal. 3.00 - —
Fishliver oil (see Oil fishliver).
Fishmeal, menhaden, ground, domestic, 60% protein, bags, Balto area ton. 138.70 - —
Fishscrap, menhaden, dried, 60% protein, bgs., Balto area ton. 134.00 - —
Formaldehyde, NF, (inhibited), dms., c.l., Zone 1, dlvd lb. .062 - —
Zone 2 lb. .065 - —
l.c.l., dlvd lb. .069 - —
tanks, Zone 1, dlvd lb. .0375- —
Zone 2, dlvd lb. .0420- —
methanol-free (uninhibited), tanks, Zone 1, dlvd lb. .0345- —
Zone 2, dlvd lb. .0395- —
Fleaseed (see Psyllium seed).
Fringetree bark, bls lb. .60 - .61
Fuller's earth, bgs., c.l., Ill. mines. ton. 19.00 - —
powd., insecticide grade, dried, bgs., c.l., Ga. or Fla. mines ton. 17.50 - —
calcined, bgs., c.l., same basis ton. 20.00- .21.75
oil-bleaching grade, 100-mesh, bgs., c.l., same basis ton. 16.50 - 17.00
200-mesh, bgs., c.l., same basis ton. 17.50 - 18.00
spent, bgs., c.l., shipt. point ton. 4.50 - 5.00
Furfural, dms., c.l., works lb. .13 - —
l.c.l., works lb. .14 - —
tanks, dlvd. E lb. .12 - —
dlvd. W lb. .13 - —
Fusel oil, refd., dms., c.l., dlvd. lb. .17½ - .22
l.c.l., dlvd lb. .18½ - .23
tanks, dlvd lb. .15 - .20
Fustic extract, cryst., No. 1, bbls., l.c.l. lb. .47½ - —
No. 2, bbls., l.c.l lb. .45½ - —
No. 3, bbls l.c.l lb. .43½ - —
liq., No. 1, bbls., l.c.l. lb. .22½ - —
No. 2, bbls., l.c.l lb. .21½ - —
No. 3, bbls., l.c.l lb. .19 - —
solid, No. 1, bxs., l.c.l. lb. .45 - —

G

G salt, 100% basis, bbls., frt alld lb. .73 - —
Gammapicoline (see g-Picoline)
Gelatin, edible, pure (pork skin), 75 Bloom test, bbl., c.l. lb. .57 - —
150 Bloom test, bbl., c.l. lb. .68 - —
200 Bloom test, bbl., c.l. lb. .74 - —
225 Bloom test, bbl., c.l. lb. .77 - —
275 Bloom test, bbl., c.l. lb. .84 - —
Gelsemium root, bls lb. .23 - .24
Gentian root, bls lb. .17 - .20
grd., bbls., bxs lb. .22 - .23
powd., bbls., bxs lb. .23 - .24
Geraniol, extra, cns., dms lb. 1.90 - 2.20
standard, cns., dms lb. .60 - 1.00
Geranyl acetate, cns lb. 1.45 - 2.20
Ginger, oleoresin, NF, from African root, bots lb. 4.00 - 7.75
from Jamaican root, bls lb. 6.00 - 10.25
Root, African, bls lb. .32 - .33
Jamaica, No. 1, bgs lb. Nominal.
No. 2, bgs lb. .38 - .39
No. 3, bgs lb. .36 - .37
Nigerian, split, bgs lb. .29 - .30
Glauber's salt, anhyd. see Sodium sulfate).
Glue, bone, extracted, 86 jellygrams, bgs., c.l., dlvd lb. .17 - —
104 jellygrams, same basis lb. .19 - —
131 jellygrams, same basis lb. .21 - —
164 jellygrams, same basis lb. .23 - —
191 jellygrams, same basis lb. .25 - —
222 jellygrams, same basis lb. .26 - —
packers' 40 jellygrams, bgs., c.l., dlvd lb. .15½ - —
65 jellygrams, same basis lb. .16½ - —
86 jellygrams, same basis lb. .17 - —
115 jellygrams, same basis lb. .17½ - —
135 jellygrams, same basis lb. .18½ - —
164 jellygrams, same basis lb. .19½ - —

Celanese CHEMICALS

simple as



Celanese petrochemical production streamlines acetyl chemical supply

Acetyl chemicals are available in large continuous volume through the . . .

Basic integrated Celanese operation by which these chemicals are petrochemically produced . . . independent of outside sources for raw materials or intermediates.

Celanese petrochemical plants at Bishop and Pampa, Texas constitute a dual continuous source of acetyls for all industries.

When an acetyl chemical figures in your formulation problems, "Celanese" is your answer.

Celanese Corporation of America,
Chemical Division, Dept. 756 K
180 Madison Avenue, New York 16.

Celanese CHEMICALS

Reg. U.S. Pat. Off.

ACETIC ACID • ACETALDEHYDE • ACETIC ANHYDRIDE • ACETONE • n-BUTYL ACETATE • n-PROPYL ACETATE

Glue, bone, renderers' 166 jelly-grams, bgs., c.l., dlvd. lb. .15 - —
Bone glue, l.c.l., prices 1c. higher.
Hide, 70-94 jellygrams, bgs., c.l., dlvd. lb. .18 - —
95-121, bgs., c.l., dlvd. lb. .20 - —
122-149, bgs., c.l., dlvd. lb. .22 - —
150-177, bgs., c.l., dlvd. lb. .24 - —
178-206 bgs., c.l., dlvd. lb. .26 - —
207-236, bgs., c.l., dlvd. lb. .28 - —
237-266, bgs., c.l., dlvd. lb. .30 - —
267-298, bgs., c.l., dlvd. lb. .32 - —
299-330, bgs., c.l., dlvd. lb. .34 - —
331-362, bgs., c.l., dlvd. lb. .36 - —
363-394, bgs., c.l., dlvd. lb. .37 - —
395-427, bgs., c.l., dlvd. lb. .38 - —
428-460, bgs., c.l., dlvd. lb. .39 - —
461-494, bgs., c.l., dlvd. lb. .40 - —
495-529, bgs., c.l., dlvd. lb. .41 - .42
Hide glue l.c.l. prices 1c. higher.

Glycerine, nat., crude, saponification, 88%, to refineries, tanks, works lb. .23 Nom.
soaplye, 80%, tanks, works lb .21 Nom.
refd., BP, 98%, dms., c.l., dlvd. lb. .30½- —
l.c.l., dlvd lb. .31 - —
tanks, dlvd lb. .30 - —
dynamite, dms., c.l., dlvd lb. .30½- —
l.c.l., dlvd lb. .31 - —
tanks, dlvd lb. .30 - —
high gravity, dms., c.l., dlvd. lb. .30½- —
l.c.l., dlvd. lb. .31 - —
tanks, dlvd. lb. .30 - —
USP, CP, 95%, dms., c.l., dlvd. lb. .29½- —
l.c.l., dlvd lb. .30 - —
tanks, dlvd lb. .29 - —
yellow, distilled, dms., c.l., dlvd. lb. .30 - —
l.c.l., dlvd lb. .30½- —
syn., dms., c.l., dlvd. lb. .30½- —
l.c.l., dlvd lb. .31 - —
tanks, dlvd lb. .30 - —
Glycine (see Acid aminoacetic).
Glycerol (see Glycerine).
Glyoxal, 30%, dms., c.l., works lb. .18½- —
l.c.l., works lb. .19 - —
tanks, works lb. .18 - —
Gold chloride, acid-brown, bots. oz. 22.50 -23.00
acid-yellow, bots oz. 20.00 -20.50
Golden seal root, NF, tested, bls. lb. 2.25 - 2.50
powd., bxs lb. 2.75 - 3.25
Graphite, amorph., powd., bgs., fib. dms., ex whse lb. .06 - .09½
crystalline, 88-90%, powd., bgs., fib. dms., ex whse lb. .19 - .21½
90-92%, powd., bgs., fib. dms., ex whse lb. .21 - .24½
95-97%, powd., bgs., fib. dms., ex whse lb. .29 - .31½
flake, No. 1, 90-95%, bgs., fib. dms., ex whse lb. .29 - .31
No. 2, 90-95%, bgs., fib. dms., ex whse. lb. .29 - .31
Grease, brown, tanks, dlvd. lb. .05¾- —
house, tanks, dlvd lb. .06½- —
white, choice, not all hog, tanks, dlvd. lb. .08½- —
yellow, tanks, dlvd. lb. .06¾- —
Green, brilliant, thioflavin, toner, molybdated, PMA, kgs, works. lb. 5.10 - —
tungstated, PTMA, kgs., works lb. 6.00 - —
Chrome, CP, dark, light, medium, blue content 1 to 15%, bbls., dlvd. N. of Tenn. and N. C., E. of Miss., including St. Paul, Minn., Davenport, Rock Island, St. Louis lb. .38 - —
16-30%, bbls., same basis lb. .39 - —
31-45%, bbls., same basis. lb. .40 - —
45-49%, bbls., same basis. lb. .43 - —
50%, bbls., same basis lb. .48 - —
Reduced color, 25%, bbls., same basis lb. .19 - —
Chrome green prices are ½c. higher, dlvd., at the following points, except as noted:—Ala., Fla., Ga., La. (Shreveport 1½c.), Miss., N. C., S. C., Tenn., Texas (Dallas, Ft. Worth, 1¼c.; El Paso, 2c.); Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph; 1c. higher dlvd. Pac. coast; for Denver, Pueblo, Salt Lake City, Wichita, prices are equalized with Chicago.
Chromium oxide, hydrated, bbls., dms., c.l., frt. alld lb. 1.00 - 1.10
pure, bgs., c.l., frt. alld lb. .59¼- —
l.c.l., same basis lb. .39¾- —
Dyes (see Dyes, coaltar).
Malachite, straight, PTMA, bbls., works lb. 4.60 - —
Paris (see Paris green).
Phthalocyanine toner, bbls., works. lb. 3.95 - —
resinated, bbls lb. 3.50 - —
water dispersable, bbls lb. 1.71 - —
Pigment B, kegs lb. 1.35 - —
paste, kegs lb. .38 - —
Grindelia robusta herb, bls lb. .38 - .40
Guaiacol, NF, cryst., dms., tins lb. 2.10 - 2.15
liq., cbys., dms lb. 2.30 - 2.40
Carbonate, NF VII, dms lb. 3.40 - 3.45
Gum, aloe (see Aloe).
Arabic, amber, sorts, bgs lb. .20 - .21
powd., USP, bbls lb. .26 - .28
Asafetida (see A).
Asphaltum (see A).
Benzoin, Sumatra, cs lb. .38 - .42
Camphor (see C).
Cellulose, high vis., bgs., 23,000-lb. lots or more, works, frt. alld. lb. .53 - —
smaller lots, same basis lb. .57 - —
Copal, Congo, No. 1, bgs lb. .21 - .23
No. 2, bgs lb. .18½- .20
No. 3, bgs lb. .16½- .18
Manila C, bgs lb. .40 - .42
CBB, bgs lb. .29 - .31
DBB, bgs. lb. .27 - .28
DK, bgs lb. .20 - .22
dust, bgs lb. .12 - .13
MA, soft, bgs lb. .20½- .21½
WS, bgs lb. .32 - .36
Philippine, pale, chips, bgs lb. .24 - .25
nubs, bgs lb. .30 - .32
seeds, bgs lb. .18 - .20
sorts, bgs lb. .20½- .22½
Pontianak, chips, bgs lb. .21 - .23
nubs, bgs lb. .38 - .40
Dammar, Batavia, A/E, cs lb. .27 - .29
dust, bgs lb. .16½- .17½
E, bgs lb. .20 - .22
East India, batu, bold, bgs lb. .14 - .15½
nubs and chips, bgs lb. .07½- .09
black, bold, bgs lb. .14 - .16
unscraped, bgs lb. .11 - .13
nubs and chips, bgs lb. .11 - .13
pale, chips, bgs lb. .13½- .14½
nubs, bgs lb. .18 - .20
Siam, cs lb. .35 - .37
Singapore, No. 1, bgs lb. .40 - .42
No. 2, bbls lb. .27 - .29
No. 3, bbls lb. No prices.
dust, bgs lb. .16½- .17
seeds, bgs lb. .20 - .22
Ester, gum-rosin type, dms., c.l., dlvd. Ill., Ind., Ky., Mich., Mid-Atl. States, N.E. States, Minneapolis, N. C., Ohio, St. Louis, St. Paul, Va., W. Va lb. .15½- —
wood-rosin type, dms., c.l., same basis lb. .15 - —
Karaya, NF, powd., No. 1, bbls. lb. .38 - .42
No. 2, bbls lb. .32 - .36
No. 3, bbls lb. .27 - .30
Locust bean, powd., bgs in. .31 - .33

Gum, myrrh, cs lb. .38 - .40
Opium (see O).
Olibanum siftings, cs lb. .15 - .20
tears, cs lb. .22 .30
Rosin (see Naval Stores, Protective Coatings Market).
Sterculia (see Gum Karaya).
Tragacanth, No. 1, ribbons, cs lb. 2.95 - 3.00
No. 2, cs lb. 2.45 - 2.50
No. 3, cs lb. 1.75 - 1.80
powdered, USP, bbls lb. 1.25 - 1.35
Gypsum, plaster of paris, 100-lb. paper, bgs., trucks, dlvd. N. Y. C ton. 20.30 - —
terra alba, dom., same basis ton. 19.00 - —
works, N. Y. C ton. 16.00 - —
imp. English, 100-lb. paper bags, ex dock, N. Y. C. ton 55.00 - —
ex warehouse ton. 60.00 -62.00

H

Hawthorn berries, bgs. lb. .28 - .32
Heliotropin, cryst., cns lb. 3.50 - 4.25
Hellebore root dom. green, bls lb. .55 - .65
Helonias root, bls lb. 1.75 - 2.00
Hematine extract, cryst., No. 1, bbls., l.c.l. lb. .47 - —
No. 2, bbls., l.c.l. lb. .43 - —
No. 3, bbls., l.c.l. lb. .41 - —
No. 4, bbls., l.c.l. lb. .39 - —
No. 5, bbls., l.c.l. lb. .37 - —
paste No. 1 bbls. l.c.l. lb. .20½- —
Henbane leaves, bls lb. .35 - .40
Heptane, indust., tanks, Bayonne, N. J gal. .19 - —
Baytown, Tex gal. .14¾- —
Borger, Tex gal. .14¾- —
Hesperidin methylphalcone, bots., works lb 50.00 - —
Hexachlorophene, dms lb. 2.60 - —
Hexalin (see Cyclohexanol).
Hexamethylenetetramine, tech., bgs., 1,000-lb. lots or more, Perth Amboy or N.Y.C. lb. .232 - —
smaller lots, same basis lb. .242 - —
fib. dms., 1,000-lb. lots or more, same basis lb. .239 - —
smaller lots, same basis lb. .249 - —
USP, dms., 500-lb. lots or more, same basis lb. .40½- —
smaller lots, same basis lb. .41½- —
Hexamine (see Hexamethylenetetramine).
Hexane, indust., tanks, Bayonne, N. J gal. .19 - —
Baytown, Tex gal. .15½- —
Borger, Tex gal. .15½- —
1-Hexanol, dms., c.l., works lb. .34½- —
l.c.l., works lb. .35 - —
tanks, works lb. .33 - —
Hexyl cinnamic aldehyde, dms. lb. 4.50 - 7.50
Salicylate, dms. lb. 1.75 - —
Hexylene, glycol, dms., c.l., dlvd lb. .16 - —
l.c.l., dlvd lb. .17 - —
tanks, dlvd lb. .14 - —
n-Hexyl methacrylate, dms., less than truckload, works lb. .71 - —
Hexylresorcinol, USP, dms., 50-lb. lots or more, dlvd lb. 14.00 - —
smaller lots dlvd lb. 14.50 - —
Histamine diphosphate, USP, bots. kilo 450.00 - —
l-Histidine hydrochloride, NF, fib. dms., 50-kilo lots, works. kilo 80.00 -85.00
1-5 kilo lots, works kilo. 90.00 -95.00
Homatropine hydrobromide, USP bots oz 9.35 -10.60
Methylbromide, USP, bots oz. 8.50 - 9.00
Hoofmeal, 17-18% ammonia, bulk, c.l., Chicago unit-ton. 7.00 - —

Glue, Bone, Renderers'—Hypernic Extract

Horehound herb, bls. lb. .16 - .19
Hydrastine, bots oz. 29.50 -31.00
Hydrochloride, NF, bots oz. 29.50 -31.00
Sulfate, bots oz. 35.00 -37.00
Hydrastinine 10-grain bots bot 1.95 —
Hydrastis (see Goldenseal).
Hydrazine, free base, ret. dms., Lake Charles, La lb. 3.00 - 3.30
Hydrate, 100%, ret. dms., Lake Charles, La lb. 1.75 - 1.95
85% ret. dms., same basis lb. 1.35 - 1.55
Hydrocortisone acetate, bulk, bots., dms. gram. 8.00 - —
alcohol, bulk, bots., dms gram. 6.00 - —
Hydrofuramide, dms., fib. ctns., works lb .30 - .40
Hydrogen chloride, anhyd., 50-lb. cyls., c.l., works lb. .45 - —
l.c.l., works lb. .55 - .60
Fluoride anhyd., cyls., dlvd. E lb. .30½- .32½
cyls., dlvd., W lb. .39 - —
tanks, works lb. .21 - —
Peroxide USP bbls dlvd lb 03¾ 05
35%, cbys., c.l., dlvd lb. .228 - —
dms., c.l., dlvd lb. .202 - —
l.c.l., dlvd. lb. .211 - —
tanks, dlvd. lb. .1800- —
Hydroquinone photo grade bbls. dms. lb. .98 - 1.00
tech., dms., c.l., dlvd lb. .77½- —
l.c.l., same basis lb. .79½- —
Hydroxycitronellal, cns lb. 5.10 6.00
Hoscine salts (see Scopolamine.)
Hyoscyamine, bots oz. 15.75 -16.00
Hydrobromide, bots oz. 11.00 -12.00
Sulfate, bots oz. 10.50 -11.50
Hypernic extract, cryst., No. 2, bbls., l.c.l. lb. .52 - —
liq., No. 1, bbls., l.c.l. lb. .35 - —
No. 2, bbls., l.c.l. lb. .27 - —

Plaskon 3120 has been recognized since 1947 as one of the highest quality alkyd resins. It is a preferred ingredient in white baking enamels for refrigerators, ranges, and other home appliances. Glycerine-based Plaskon imparts qualities of durability, gloss and adhesion to these enamels.

since 1947 Glycerine contributes Lasting Toughness

Good color retention, adhesion, and film toughness are of primary importance in baked coatings, interior and exterior enamels, automotive undercoats, general industrial air-drying primers, and coatings for metal furniture and equipment. Glycerine alkyds are favored as vehicles for coatings of this type.

Not only does Glycerine impart the desired properties to the resin. It also simplifies the resin-making process because it is so easy to handle. Its cooking qualities are excellent. It is easily controlled to give a product of low acid number without undue hazard of gelation.

Want detailed information on the chemical and physical properties of Glycerine? "Why Glycerine for Alkyd Resins and Ester Gums?" is yours for the asking. Write Glycerine Producers' Association, 295 Madison Avenue, New York 17, N. Y.

Nothing takes the place of Glycerine

Ichthammol—Linalyl Acetate

I

Ichthammol, NF, dms....lb. .90 - .75
Indian red (see Red, Indian).
Indigo (see Dyes, coaltar, 1171 Indigo synthetic).
Indole, CP, bots....lb.17.00 -21.00
Inositol, bots., dlvd....lb. 5.00 - —
dms., dlvd....lb. 4.50 - 4.75
Insect flowers (see Pyrethrum).
Iodine, crude, kgs....lb. 1.45 - —
resub, USP, kgs, dms....lb. 2.30 - 2.32
Iodochlorohydroxyquinolin, USP, dms....lb. 5.00 - —
Iodoform, NF, dms., kgs....lb 4.90 5.00
a-Ionone, cns....lb. 6.55 - 6.85
6.80 -11.25
b-Ionone, cns....lb. 4.30 -11.25
Methyl (see under M)
Ipecac, root, bgs....lb. 8.00 - 8.25
powd., bbls., bxs....lb. 8.50 - 8.75
Irish moss, bleached, prime, bls....lb. .30 - .35
Iron Compounds (see Ferric or Ferrous).
Isoborneol, cns....lb. 1.25 - 1.70
Isobornyl acetate, cns....lb. .62 - .95
formate dms....lb .80 - —
Propionate, dms....lb 1.15 - 1.45
Isobutyl acetate, perfume grade, cns....lb. .75 - 1.00
solvent grade dms, c.l. dlvd f.o.b. of Rockies....lb. .13¼- —
l.c.l., same basis....lb. .14¼- —
tanks, same basis....lb. .11¼- —
Isobutyraldehyde, CP, dms., c.l., dlvd....lb. .27½- —
l.c.l., dlvd....lb. .28½- —
tech., dms., c.l., dlvd....lb. .21½- —
l.c.l., dlvd....lb. .22½- —
tanks, dlvd....lb. .19½- —
Isoeugenol, cns....lb. 3.45 - 4.25
Isoniazid, powd., bulk, 25-kilo lots or more....kilo.23.00 -25.50
smaller lots....kilo.24.00 -26.00
Isopentane, soml. grade, tanks, f.o.b. Tex. refy....gal. .15½- —
Isonicotinic acid hydrazide (see Isoniazid).
Isophorone, dms., c.l., works....lb. .24¼- —
l.c.l., works....lb. .24¾- —
tanks, works....lb .22½- —
Isopropanol (see Alcohol, Isopropyl).
Isopropyl acetate, dms., c.l., dvld. ....lb. .12 - —
l.c.l., same basis....lb. .13 - —
tanks, same basis....lb. .10 - —
Alcohol (see Alcohol, Isopropyl).
Benzene (see Cumene).
Ether, dms., c.l., dlvd....lb. .07 - —
l.c.l., dlvd....lb. .08 - —
tanks, dlvd....lb .05 - —
Isopropylamine (see Mono, Di, or Tri-).
Isoquinoline, dms., works....lb. .65 - 1.25

J

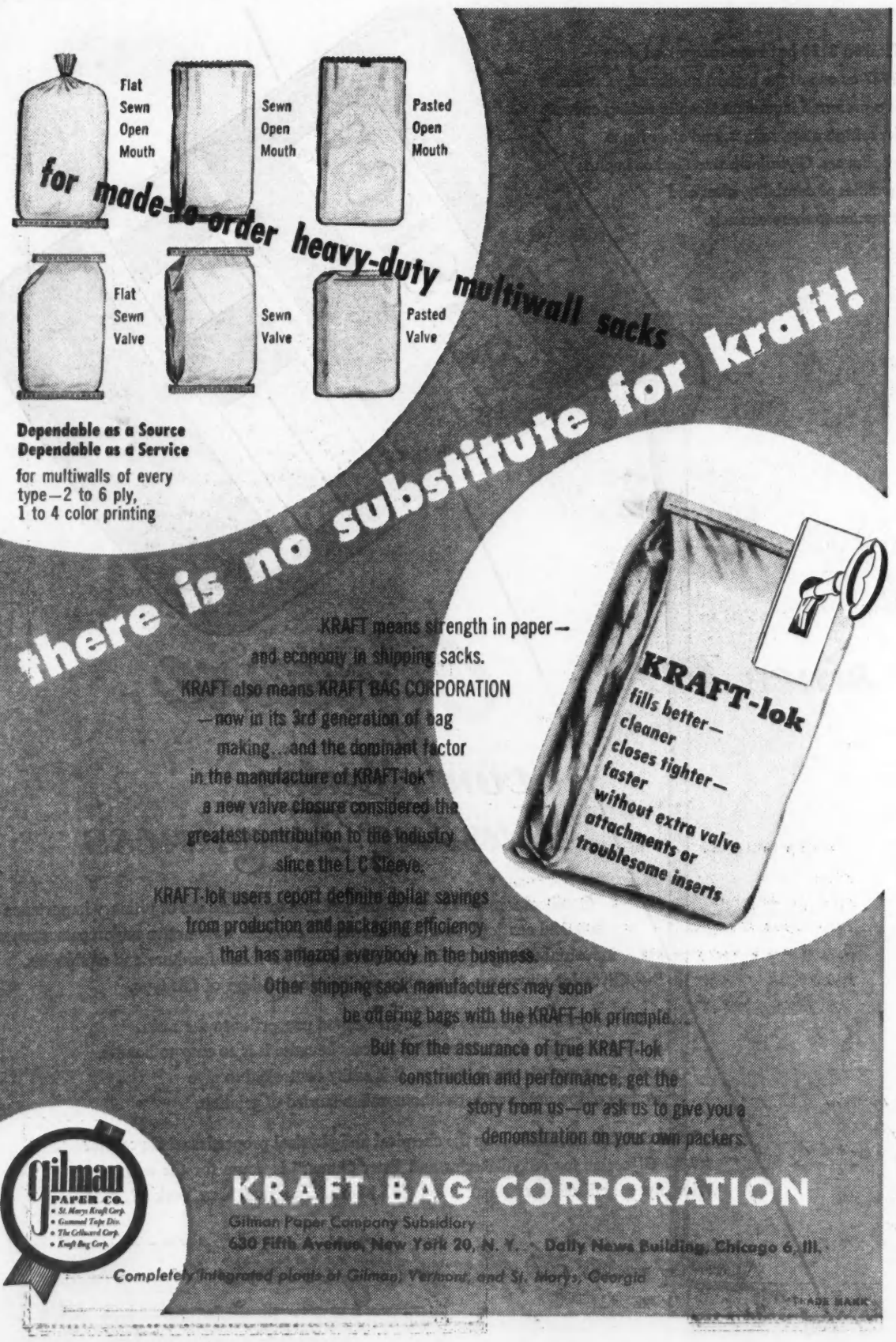
Jalap root, NF, bls....lb. .38 - .55
powd., bbls., bxs....lb. .49 - .66
Juniper berries, bgs....lb. .18 - .20
Tar, NF, dms....lb. .42 - .60

K

Kaolin (see also Clay China).
NF, powd., fib. dms....lb. .08 - .16¼
colloidal, fib. dms....lb. .15 - .15¼
Kola nuts, bgs....lb. .12 - —

L

Lactose, crude, bgs., c.l., works....lb. .15 - —
edible, fib. dms., 30,000-lb. lots, works....lb. .22 - —
2,000-lb. lots, works....lb. .22¾- —
200-1,800-lb. lots, works....lb. .23¼- —
Edible lactose in bgs., lc. lower.
USP, fib. dms., 30,000-lb. lots, works....lb. .24 - —
2,000-lb. lots, works....lb. .24¾- —
200-1,800-lb. lots, works....lb. .25¼- —
USP lactose in bgs., lc. lower.
Lady's slipper root, bls....lb. 1.70 - 1.75
Lanolin, cosmetic, dms., works....lb. .33 - .36
USP, anhyd., dms., works....lb. .30 - .33
hydrous, dms., works....lb. .29 - .32
Lard, cash, dms., Chicago....lb. .14¾- —
Larkspur seed, bgs....lb. .20 - .23
Lauryl chloride, dist., dms. c.l., works, frt. equald....lb. .74 - —
l.c.l., same basis....lb. .75 - —
Methacrylate, normal, dms., c.l. or truckload....lb. .65½- —
Lavender flowers, medium, bls....lb. .55 - .60
ord., bls....lb. .16 - .20
select, bls....lb. .90 - —
Lead acetate, white, cryst., bbls....lb. .23 - —
gran, bbls....lb. .22 - —
powd., bbls....lb. .23 - —
NF, cryst., gran., powd....lb. .31 - .33
Arsenate, acid powder, dealers, 3-lb. bgs, or larger, c.l., frt. alld. on 96 lbs. or more....lb. .27½- —
l.c.l., frt. alld....lb. .28½- —
1-lb. bgs., c.l....lb. .41½- —
l.c.l....lb. .42½- —
Blue, basic sulfate, bbls., c.l., shipt. point, frt. alld....lb. .15¾- —
l.c.l., same basis....lb. .16¾- —
Lead carbonate (see Lead, white).
Chloride, dms....lb. .48 - —
Iodide, NF, V jars....lb. 3.82 - —
Linoleate, fused, 26%% Pb, dms. lb. .38 - —
Metal, pigs, prime, N. Y....lb. .15 - —
St. Louis....lb. .1480- —
Metallic paste, dms., 20,000-40,000-lb. lots, works....lb. .33¾- —
10,000-20,000-lb. lots, same basis....lb. .34¾- —
2,000-10,000-lb. lots, same basis....lb. .35¼- —
200-2,000-lb. lots, same basis, lb. .35¾- —
Prices ex whse. Jersey City, N. J., 4½c. per lb. higher.
Monosilicate, bgs., c.l., works, frt. equald....lb. .1580- —
l.c.l., same basis....lb. .1630- —
Naphthenate, liq., 16% Pb, dms., dlvd....lb. .17¼- —
24% Pb., dms., dlvd....lb. .23¾- —
solid, 37% Pb., dms., dlvd....lb. .31¼- —
Nitrate, bbls....lb. .22¼- —
Orthosilicate gel., 50% PbO, dms., works....lb. .32¾- —
60% PbO, dms., works....lb. .31¾- —
Peroxide, powd., tech., bbls....lb. .38¾- .40¼
Phthalate, dibasic, dms., works....lb. .41 - —
Red, 95% Pb_3O_4, or less, bbls., c.l., works, frt. equald....lb. .17½- —
l.c.l., same basis....lb. .18 - —
97% Pb_3O_4, bbls., c.l., same basis....lb. .17¾- —
l.c.l., same basis....lb. .18 - —
98% Pb_3O_4, bbls., c.l., same basis....lb. .18 - —
l.c.l., same basis....lb. .18½- —
Resinate, precip., 23% Pb, dms., dlvd....lb. .31 - —
Salicylate, normal, dms., works....lb. .46 - —
Sulfate (see Lead, blue, basic sulfate; Lead, white, basic sulfate).
Tallate, liquid, 16% Pb, dms....lb. .15¼- —
24% Pb, dms....lb. .20¼- .20½
White, basic carbonate, bgs., c.l., shipt. point, frt. alld....lb. .17½- —
l.c.l., same basis....lb. .18½- —
basic silicate, bgs., c.l., shipt. point, frt. alld....lb. .16 - .19¼
l.c.l., same basis....lb. .17 - .20¼
basic sulfate, bgs., c.l., shipt. point, frt. alld....lb. .15¾- —
l.c.l., same basis....lb. .16¾- —
Lecithin, edible, tech., bleached, non-ret. dms., c.l., works....lb. .15 - .17
l.c.l., same basis....lb. .15½- .17½
unbleached, non-ret., dms., c.l., same basis....lb. .13 - .15
l.c.l., same basis....lb. .14½- .16½
dl-Leucine, dms., works....lb.12.25 -15.00
Licorice root, whole, bbls....lb. .08 - .12
gran., bbls....lb. .12 - .17
powd., bbls....lb. .10 - .15
Lignosulfonate, 70% tannin, bgs., c.l., works....lb. .06½- —
l.c.l., works....lb. .06¾- —
Lime, agricultural, bulk, works....ton.14.50 - —
Chemical (quicklime) lump, pebble, bulk, Adams, Mass....ton.12.50 - —
Annville, Pa....ton.11.50 - —
Austin, Texas....ton 9.50 - —
Bellefonte, Pa....ton.11.50 - —
Buffalo, N. Y....ton 14.00 - —
Cedar Hollow, Pa....ton.11.50 - —
Duluth, Minn....ton.12.50 - —
El Paso, Texas....ton.14.00 - —
Farnams, Mass....ton.14.00 - —
Gibsonburg, Ohio....ton 12.50 - —
Hannibal, Mo....ton.10.00 - —
Keystone, Ala....ton 10.25 - —
Kimballton, Va....ton.10.25 - —
Knoxville, Tenn....ton 10.50 - —
Lee, Mass....ton.12.50 - —
Lewisburg, Ohio....ton.10.00 - —
Limedale, Ark....ton.10.00 - —
Los Angeles, Cal....ton 25.10 -26.84
Marble Cliff, Ohio....ton.10.00 - —
Martinsburg, W. Va....ton.11.00 - —
Mosher, Mo....ton.11.25 - —
Nelson, Ariz....ton.14.50 -23.65
Quincy, Ill....ton.10.00 -13.00
Reddick, Fla....ton 13.50 - —
Scotrock, Ala....ton.10.25 - —
Springfield, Mo....ton.12.25 - —
Winooski, Vt....ton 15.50 - —
Woodville, Ohio....ton.11.50 - —
York, Pa....ton.15.50 - —
Hydrated, paper bgs., Adams, Mass....ton.15.50 - —
Annville, Pa....ton.14.50 - —
Austin, Texas....ton.13.00 - —
Bellefonte, Pa....ton.14.50 - —
Buffalo, N. Y....ton.16.00 - —
Cedar Hollow, Pa....ton.14.50 - —
Chicago, Ill....ton.15.00 - —
Duluth, Minn....ton.14.00 - —
El Paso, Texas....ton.17.50 - —
Engle, W. Va....ton.14.50 - —
Farnams, Mass....ton.14.00 - —
Gibsonburg, Ohio....ton.16.50 - —
Hannibal, Mo....ton.12.00 - —
Keystone, Ala....ton.13.50 - —
Kimballton, Va....ton 13.50 - —
Knoxville, Tenn....ton.13.00 - —
Lee, Mass....ton 15.50 - —
Lewisburg, Ohio....ton 14.00 - —
Limedale, Ark....ton.12.00 - —
Marble Cliff, Ohio....ton.13.50 - —
McNeil, Tex....ton.13.00 - —
Menominee, Mich....ton.14.00 - —
Mosher, Mo....ton.13.50 - —
North Tazewell, Va....ton.12.75 - —
Quincy, Ill....ton.10.00 -12.00
Reddick, Fla....ton.16.00 - —
Scotrock, Ala....ton.13.50 - —
Springfield, Mo....ton.12.25 - —
Winooski, Vt....ton.15.50 - —
Woodville, Ohio....ton.14.50 - —
York, Pa....ton.14.50 - —
Spray, paper bgs., Adams, Mass....ton.17.00 - —
Annville, Pa....ton.17.00 - —
Austin, Texas....ton.13.00 - —
Bellefonte, Pa....ton.17.50 - —
Carey, Ohio....ton.11.00 - —
Duluth, Minn....ton.15.00 - —
Engle, W. Va....ton.14.50 - —
Farnams, Mass....ton.14.00 - —
Gibsonburg, Ohio....ton.16.50 - —
Keystone, Ala....ton 13.50 - —
Kimballton, Va....ton.13.50 - —
Lee, Mass....ton 17.00 - —
Lewisburg, Ohio....ton.16.00 - —
Marble Cliff, Ohio....ton.16.00 - —
McNeil, Tex....ton.16.00 - —
Menominee, Mich....ton 14.00 - —
Mosher, Mo....ton.13.50 - —
North Tazewell, Va....ton 12.75 - —
Reddick, Fla....ton.16.00 - —
Rockland, Me....ton.10.00 - —
Springfield, Mo....ton 12.25 - —
Scotrock, Ala....ton.13.50 - —
Winooski, Vt....ton.17.00 - —
Woodville, Ohio....ton.16.50 - —
York, Pa....ton.15.50 - —
Lime salts (see Calcium).
Lime-ammonia nitrogen 20.5% N (see Ammonium nitrate with dolomite).
Limestone, grd., bgs., works ton. 3.50 - 4.00
Linalool, ex bois de rose oil, dms. lb. 7.35 - 7.65
ex lignaloe wood oil, dms....lb. 6.50 - 7.10
Linalyl acetate, ex bois de rose, 90-92%, dms....lb. 6.75 - 7.05
96-98%, dms....lb. 6.75 - 7.15
ex petitgrain, bots....lb. 5.90 - 6.25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Sewn Open Mouth
Pasted Open Mouth
for made-to-order heavy-duty multiwall sacks
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Sewn Valve
Pasted Valve
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Dependable as a Service
for multiwalls of every type—2 to 6 ply, 1 to 4 color printing
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KRAFT also means KRAFT BAG CORPORATION—now in its 3rd generation of bag making...and the dominant factor in the manufacture of KRAFT-lok* a new valve closure considered the greatest contribution to the industry since the L C Sleeve.
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Other shipping sack manufacturers may soon be offering bags with the KRAFT-lok principle...
But for the assurance of true KRAFT-lok construction and performance, get the story from us—or ask us to give you a demonstration on your own packers.
KRAFT-lok fills better— cleaner closes tighter— faster without extra valve attachments or troublesome inserts
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KRAFT BAG CORPORATION
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TRADE MARK

Lindane, 25% formulation, dealers, dms., works lb. 1.58 - —
99%, tech., dealers, dms., dlvd., lb. 3.10 - —
Linden flowers with leaves, bls. lb. .34 - .35
without leaves, bls. lb. .40 - .41
Linseed meal, expeller, 32-34% bulk, Midwest, mills ton.69.00 - —
extracted, 36%, bulk, same basis, ton 65.00 - —
Litharge, coml., powd., bbls., c.l., works, frt. equald lb. .16½- —
l.c.l., same basis lb. .17 - —
Lithium benzoate, dms lb. 1.65 - 1.67
Bromide, NF, dms., works, frt. equald lb. 2.16 - —
Carbonate, tech., c.l., works and dlvd lb. .93 - 1.00
l.c.l., same basis lb. 1.00 - 1.20
NF, c.l., dlvd lb. 1.45 - —
l.c.l., dms lb. 1.50 - 1.63
Chloride, CP, anhyd., ton lots lb. 1.45 - —
tech., cryst., dms lb. 1.10 - 1.25
Citrate, NF, dms lb. 1.60 - 1.64
Fluoride, bbls., 10,000-lb. lots lb. 2.15 - —
ton lots lb. 2.20 - —
less ton lots lb. 2.25 - —
Hydride, powd., dms., works lb.12.00 -14.00
Hydroxide, monohydrate, dms., ton lots lb. 1.10 - —
Manganite, dms., works lb. .95 - 1.15
Nitrate, dms., 100-lb. lots lb. 2.25 - —
Salicylate, dms lb. 1.60 - 1.70
Silicate, dms., works lb. 1.10 - 1.30
Sulfate, dms., 100-lb. lots lb. 1.45 - —
Lithopone, ord., bgs., c.l., dlvd. lb. .07½- —
l.c.l., dlvd. lb. .08¼- .08½
titanated (high-strength), bgs., c.l., dlvd. lb. .10 - —
l.c.l., dlvd lb. .11 - —

Lithopone prices, Pacific Coast, 1c. per lb. higher.

Lobelia herb, bls. lb. 1.25 Nom.
Lobeline sulfate, bots., works oz.29.50 -33.50
Logwood extract, cryst., No. 1, bbls., l.c.l. lb. .41 - —
No. 2, bbls. l.c.l. lb. .39 - —
liq., No. 1, bbls., l.c.l. lb. .20 - —
No. 2, bbls. l.c.l. lb. .19 - —
No. 3, bbls. l.c.l. lb. .18½- —
solid, No. 1, l.c.l. lb. .35 - —
Lycopodium, cs. lb. 1.50 - —
di-Lysine hydrochloride, bots. kilo.140.00 -150.00

M

Mace, Siauw, No. 1, bls. lb. 1.35 - —
West Indian, No. 1, bls. lb. 1.40 - —
Magnesia, calcined, tech., bgs., ctns., works lb. .25¼- .26
syn. rubber grade, light, bgs., c.l., works lb. .29¼- —
l.c.l., works lb. .30 - —
extra light, works lb. .29¼- .30
USP, light, ctns. lb. .35 - .36
heavy, bbls. lb. .36 - .38
Magnesite, chemical grade, calcined, powd., bgs., c.l., works, frt. equald ton.82.50 - —
dead-burnt, standard grain, bulk, c.l., Chewalah, Wash. ton.38.00 - —
Magnesium bromide, jars lb. .90 - 1.00
Carbonate, tech., bgs., c.l., frt. equald lb. .10½- —
truckloads, frt. equald lb. .11 - —
l.c.l., frt. alld lb. .12 - .13
USP, bgs., c.l., frt. equald lb. .12½- —
l.c.l., frt. alld lb. .13½- —

Magnesium carbonate is quoted frt. alld. to N. J. except to Atlantic, Burlington, Cape May, Cumberland, Glostershire, Ocean and Salem counties and to Phila county, Pa. Frt. equald with N. Y. C. on all other destinations.

Chloride, anhyd., 92% flake or pebble, dms., c.l., works. lb. .12¾- —
l.c.l., same basis lb. .14 - .15
hydrous, 99% flake, bgs., c.l., works ton.50.00 - —
l.c.l., bgs ton.55.00 -105.00
Gluconate, dms., cns. lb. 1.30 - 1.37
Glycerophosphate, dms., works lb. 5.40 - 5.50
Hydroxide, NF, medicinal, bbls., dms. kgs lb. .26½- .30
Metal, 99.8% ingots, cs., works lb. .27 - .2820
sticks, cs., works, frt. alld. on carlots lb. .46 - .48
Oxide (see Magnesia, calcined).
Peroxide, 15%, dms., works lb. 1.00 - 1.05
Phosphate, tribasic, NF, bbls. lb. .75 - —
Silicate (see Talc).
Silicofluoride, bbls., works lb. .09 - .10
Sulfate, tech., bgs., c.l., works, 100 lbs. 2.15 - —
l.c.l., works 100 lbs. 2.90 - 3.15
USP, cryst., bgs., c.l., works, 100 lbs. 2.35 - —
l.c.l., 5,000 lbs., 1 withdrawal 100 lbs. 3.10 - —
smaller lots 100 lbs. 3.35 - —
Trisilicate, USP, dms., 5,000-lb. lots lb. .38 - —
1,000-lb lots lb. .40 - —
100-lb lots lb. .45 - —

Bulky and super grades of magnesium trisilicate, 1c. per lb. higher.

Malathion, dms., works lb. 1.05 - —
Maleic anhydride, dms., c.l., dlvd. E lb. .27 - —
l.c.l., dlvd. E lb. .28 - —

Prices on maleic anhydride W of Rockies, 1½c. higher.

Mandrake root, bls. lb. .30 - .32
Manganese acetate, bbls., dlvd lb. .35 - —
Arsenate, bgs lb. .16 - —
Borate, tech., bbls lb. .24 - —
Carbonate, bbls., works lb. .22 - —
Chloride, anhyd., dms., works lb. .25¼- —
Dioxide, African, 84-87%, 40,000 to 99,999-lb. lots, paper bgs., gross for net, works. ton.88.00 - —
paper-lined burlap bgs., works ton.91.50 - —
dms., works ton.94.00 - —

Prices for manganese dioxide in 10,000 to 40,000-lb. lots, $3 per ton higher.

Gluconate, dms. lb. 1.79 - 1.93
Glycerophosphate, NF, fib dms lb. 4.70 - 4.80
Hydrate, bbls., dlvd. lb. .36 - —
Hypophosphite, NF, dms. lb. 3.52 - —
Linoleate, liq., 4.35% Mn., dms. lb. .32½- —
solid, precip., 8.2% Mn., bbls. lb. .37½- —
Metal, cs., dlvd. East lb. .30 - .35
Naphthalene, liq., 6% Mn., dms., frt. alld lb. .27 - —
Resinate, fused, 3½% Mn., dms lb. .23 - —
precip., 6½-7% Mn., dms. lb. .27 - —
Sulfate, fertilizer grade, 65%, bgs., c.l., dlvd. S. E. ton.80.50 - —
l.c.l., dlvd. S. E. ton.87.50 - —
Tallate, 6%, dms. lb. .24 - —
Mangrove bark, E. African, 35% tannin, c.l., ex dock ton.68.00 - —
So. American 30% tannin, c.l., ex dock ton.55.00 -58.00
Mannitol, coml., dms., works lb. .40 - .42
Melamine, bgs., ton lots, works lb. .33 - —
500 to 2,000-lb lots, works lb. .33½- —
smaller lots, works lb. .38½- —
Menadione, USP, bots. gram. .06 - .06¼
Menthol, nat., USP, Brazilian, cs. lb. 8.15 - 8.40
*Japanese, cs. lb.13.00 - —
syn., USP, racemic, cns. lb. 5.45 - —
Menthyl salicylate, tins. lb. 4.00 - 4.25

2-Mercaptobenzothiazole, bgs., fib, dms., ton lots, works, frt. alld lb. .38 - —
less ton lots, same basis lb. .40 - —
Mercaptobenzothiazyl disulfide, bgs., fib, dms., ton-lots, works, frt. alld lb. .48 - —
less ton lots, same basis lb. .50 - —
Mercuric chloride, NF, cryst., dms., 50-lb. lots or more lb. 4.98 - —
gran. or powd., dms., 50-lb. lots or more lb. 4.78 - —
Cyanide, NF VIII, powd., fib. dms. lb. 6.84 - —
Iodide, red, NF, fib. dms. lb. 7.72 - —
Oxide, red, NF, powd., fib. dms lb. 5.97 - 6.01
yellow, tech. (see Yellow, mercury oxide).
USP, fib. dms. lb. 6.14 - —
Mercurous chloride (see Calomel).
Iodide, yellow, NF. lb. 7.72 - —
Mercury, ammoniated (see White precipitate USP).
Metal, 76 lbs. per flask, net flask.320.00 -325.00
Mesityl oxide, dms., c.l., dlvd. lb. .1350- —
l.c.l., dlvd. lb. .1450- —
tanks, dlvd. lb. .1150- —
Meta-aminophenol (see m-Aminophenol).
Metachloroaniline (see m-Choloraniline)
Metanitroaniline (see m-Nitroaniline)
Metanitroparatoluidine (see m-Nitro-p-toluidine).
Metaphenylenediamine (see m-Phenylenediamine)
Metatoluidine (see m-Toluidine)
Metatolylenediamine (see 2,4-tolylenediamine).
Methanol, nat., denaturing grade, tanks, frt. alld gal. .70 - —

Prices on natural methanol W. of Miss., 5c. higher.

syn., Zone 1, dms., c.l., dlvd., or truckload min., frt. alld. gal. .42 - —
l.c.l., same basis gal. .43 - —
Methanol, syn., tankwagon, 2-4,000 gals., dlvd., Metropolitan areas gal. .30 - —
tanks, dlvd., or 4,000 gal. min., frt. alld gal. .27 - —
4,000 gal. min., frt. equald. with Camden, N. J. gal. .25½- —
Zone 2, dms., c.l., or truckload min., frt. alld or dvld gal. .47 —
l.c.l., same basis gal. .53 - —
tankwagon, 2,-4,000 gals. min. dlvd. Metropolitan areas. gal. .35 - —
tanks, 4,000 gal., min., frt. alld. or dlvd gal. .32 - —

Synthetic methanol zones are:—Zone 1 is all continental U. S. E. of eastern boundaries of Ariz., Idaho and Utah. Zone 2 is remainder of U. S. west of above state boundaries, comprising Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.

Methenamine (see Hexamethylenetretramine).
dl-Methionine, fib. dms., frt. alld., 50-lb. or more lb. 3.50 - —
feed grade, 98% fib dms, same basis lb. 2.65 - —
Methoxychlor, 50% wettable powder, dealers dms cs., frt. alld lb. .61 - .66
Methyl abietate, non-ret. dms., c.l., dlvd. zone 1 lb. .20½- —
l.c.l., same basis lb. .21 - —
hydrogenated, non-ret. dms., c.l., dlvd., zone 1 lb. .21 - —
l.c.l., same basis lb. .21½- —

Zone 1 includes New England and Middle Atlantic states, Va., W. Va., N. C., Ohio, Ky., Mich., Ind., Ill., Wis., St. Paul and Minneapolis, Minn.; St. Louis, Mo.; Miss., Ala., Ga., Fla., S. C. and Tenn.

Methyl acetone, nat., dms., l.c.l., E. of Miss., frt. alld gal. .62½- —
syn., dms., c.l., frt. alld. E gal. .57 - —
l.c.l., frt. alld. E gal. .63 - —
tanks, frt. alld E gal. 45 - —

Synthetic methyl acetone E. territory is all States East of and including Colo., Mont., N. Mex. and Wyo. West territory all states west of those four.

Acrylate, dms., c.l., and truckload, works lb. .44½- —
less than truckload, works lb. .45½- —
tanks, works lb. .42¾- —
Alcohol (see Methanol).
Amyl acetate, dms., c.l., dlvd. E lb. .15 - —
l.c.l., dlvd. E lb. .16 - —
tanks, dlvd. E lb. .13 - —
Ketone, dms., works lb. 1.05 - —
Anthranilate, cns. lb. 2.50 - 2.65
Benzoate, cns., dms lb. .53 - .55
Bromide, jobbers qts., various sizes works lb. .47 - .61
Cellulose, special, vis. (1,500-4,000 cps.) 50-lb bgs., c.l., works lb. .78 - —
2,000-lb. lots and more, same basis lb. .65 - —
smaller lots, frt. alld. on 100 lbs lb. .89 - 1.00
standard vis., (15-400 cps.), 50-lb., c.l., alld lb. .66 - —
2,000-lb. lots and more, same basis lb. .72 - —
smaller lots, frt. alld. on 100 lbs lb. .75 - .88

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Methyl chloride, indust., cyls., frt. equald..lb. .21 - —
tanks, multi-unit, same basis..lb. .15 - —
single unit, same basis...lb. .11½- —
refrigerator mfrs., cyls., dlvd..lb. .40 - .48
other consumers or service men, cyls., dlvd..lb. .37 - —
Cinnamate, cns.....lb. 1.43 - 1.80
Cyclohexanol, dms., c.l., works..lb. .35½- —
l.c.l., works.....lb. .36 - —
tanks, works.....lb. .34 - —
Ethyl ketone, dms., c.l., dlvd..lb. .13 - —
l.c.l., dlvd.....lb. .14 - —
tanks, dlvd.....lb. .11 - —
Formate, refd., dms.....lb. .35 - .40
tech., non-ref. dms., any quantity, works lb. .03 - —
tanks, works.....lb. .07 - —
Heptin carbonate, bots.....lb.33.00 -42.00
p-Hydroxybenzoate, fib. dms....lb. 1.90 - 2.00
Ionone, standard, cns., dms....lb. 3.80 - 4.65
Isobutyl carbinol, dms., c.l., dlvd..lb. .15 - —
l.c.l., dlvd.....lb. .16 - —
tanks, dlvd.....lb. .13 - —
Ketone, dms., c.l., dlvd.....lb. .15 - —
l.c.l., dlvd.....lb. .16 - —
tanks, dlvd.....lb. .13 - —
Lactate, dms., l.c.l., works.....lb. .35 - —
Methacrylate, dms., c.l., and truckload, frt. equald., with Belle, W. Va., and Arlington, N. J...lb. .36½- —
smaller lots, same basis..lb. .37 - —
tanks same basis.....lb. .35 - —
Naphthyl ketone, cryst., cns..lb. 3.60 - 4.30
Parahydroxybenzoate (see Methyl p-Hydroxybenzoate).
Roseaniline chloride, NF, fib. dms. lb. 5.44 - —
Salicylate, USP, cns., 50 lb. lots.lb. .56 - —
dms.....lb. .53 - —
Testosterone, USP, 100-gram bots. gram. .79 - —
2-Methyl-5-ethyl pyridine, dms., c.l., works..lb. .47½- —
l.c.l., works.....lb. .48 - —
tanks, works.....lb. .46 - —
Methylene blue, fib. dms., 100-lb. lots, frt. adjusted.....lb. 3.25 - 3.60
smaller lots, same basis lb. 3.40 - 3.60
Chloride, indust., dms., c.l., dlvd. E..lb. .13½- —
Methylionone, A, cns.....lb. 6.55 - 8.80
D, cns.....lb. 7.50 - 9.55
prime, cns.....lb. 4.55 - 6.40
standard, dms., cns.....lb. 3.80 - 4.65
5-Methylnaphthalene, 32°C. m.p., dms., works..lb. .90 - —
Methylparaben (see Methyl parahydroxybenzoate).
Methylpentanediol (see Hexyleneglycol).
Methylphenylpyrazolone (see 1-Phenl-3-methylpyrazolone-5).
Methylthionine chloride (see Methylene blue).
Mica, dry-grd., paint plastic, 100 mesh, bgs., c.l., works..lb. .04¼- —
roofing, 20 to 80 mesh, works.lb. .03 - .04
wet-grd., biotite, bgs., c.l., works, frt. alld. E..lb. .06¼- —
l.c.l., ex-whse. or frt. alld. E..lb. .07 - —
paint, or lacq., bgs., c.l., works, frt. alld..lb. .07¾- —
l.c.l., ex-whse. or frt. alld. E..lb. .08½- —
rubber, bgs., c.l., works, frt. alld. E..lb. .07½- —
l.c.l., ex-whse. or frt. alld. E..lb. .08½- —
wallpaper, bgs., c.l., works, frt. alld., E..lb. .07¾- —
l.c.l., ex-whse. or frt. alld. E..lb. .08¼- —
white, extra, fine bgs., c.l., works, frt. alld. E..lb. .07¾- —
l.c.l., ex-whse. or frt. alld. E..lb. .08¼- —
Mica, wet-grd. W. of Miss R. ½c. higher. W of Rockies, 1c. higher.
Milk powder, non-fat, roller, bgs., c.l...lb. .12 - .1535
spray, bgs., c.l.....lb. .14 - .1610
whole, roller, bgs., c.l.....lb. No prices.
spray, bgs., c.l.....lb. .27 - .31
Sugar (see Lactose).
Mineral spirits (see Petroleum mineral spirits).
Molasses, blackstrap feed grade, tanks, New Orleans gal. .10½- .11
New York.....gal. .12 - —
Molybdenum metal, 98% Mo powd., kgs..lb. 3.00 - 3.25
Trioxide, pure, kgs., works, basis Mo. content..lb. 1.35 - —
tech., kgs., works, basis Mo. content..lb. 1.14 - —
Monobutylamine, dms., c.l., E. of Rockies..lb. .53 - —
l.c.l., same basis.....lb. .56 - —
tanks, same basis.....lb. .53 - —
Monochlorobenzene dms., c.l., frt. alld. or dlvd. E..lb. .11½- —
l.c.l., same basis.....lb. .12½- —
tanks, same basis.....lb. .10 - —
Monochlorobenzene prices in the West, 1¼c higher.
Monoethanolamine, dms., c.l., dlvd. E..lb. .26¾- —
l.c.l., same basis.....lb. .27¾- —
tanks, same basis.....lb. .25 - —
Monoethylalphanaphthylamine (see N-Ethyl-a-naphthylamine).
Monoethylamine, 70% contained amine, dms., c.l., dlvd E..lb. .33 - —
l.c.l., dlvd. E.....lb. .34 - —
tanks, dlvd. E.....lb. .31 - —
Monoethylaniline (see N-Ethylaniline).
Monoethylortho-toluidine (see N-Ethyl-o-toluidine).
Monoisopropylamine, dms., c.l., dlvd. lb. .30½- —
l.c.l., same basis.....lb. .31½- —
tanks, same basis.....lb. .28½- —
Monomethylamine, 30-35% soln., dms., c.l., frt. equald., 100% basis. lb. .40 - —
l.c.l., 100% basis.....lb. .40½- —
tanks, 100% basis.....lb. .31 - —
40% soln., dms., c.l., frt. equald. 100% basis..lb. .37 - —
l.c.l., frt. equald.....lb. .37½- —
tanks, 100% basis.....lb. .31 - —
Monosodium fluoroacetate (see Sodium fluoroacetate monobasic).
Glutamate (see Sodium glutamate monobasic).
Phosphate (see Sodium phosphate monobasic).
Mono-tertiary-butylmetacresol (see 6-tert-Butyl-m-cresol).
Morphine cns.....oz.12.60 -12.60
Acetate, anhyd., cns.....oz. 9.95 -10.00
Hydrobromide, cns.....oz. 9.90 9.95
Hydrochloride, NF, cns.....oz. 9.90 9.95
Sulfate, USP, cns.....oz. 9.90 -10.05
Morpholine dms., c.l., dlvd. E lb. .54¾- —
l.c.l., dlvd. E.....lb. .55¾- —
tanks, dlvd. E.....lb. .52¾- —
Musk, nat., Tonquin grains, bots. oz. No stocks.
syn., ambrette, 100-lb. lots, fib. dms..lb. 5.15 - —
25-lb. lots, cns.....lb. 5.20 - —
5-lb. lots, cns.....lb. 5.30 - —
ketone, 100-lb. lots, fib. dms..lb. 5.30 - —
25-lb lots cns.....lb. 5.35 - —
5-lb. lots, cns.....lb. 5.45 - —
xylol, 100-lb. lots, fib. dms..lb. 1.40 - —
25-lb lots, cns.....lb. 1.45 - —
5-lb. lots, cns.....lb. 1.50 - —

Mustard seed, Danish, yellow, bgs lb. .12½- —
Dutch, yellow, bgs.....lb. .12½- —
English, yellow, bgs.....lb. Nominal
Montana, oriental, bgs.....lb. .09 - .09¼
yellow, bgs.....lb. .12 - —
Myrobalans, J-1, assorted, bgs., ex dock..ton.54.00 - —
crushed, bgs., ex dock.....ton.63.00 -65.00
ordinary, bgs., ex dock.....ton.43.00 - —
extract, Indian, solid, 55% tannin, bgs., exdock, plus duty. lb. .07¼ Nom.

N

Naphtha, painters (see Petroleum naphtha V. M. & P.).
Solvent (see S).
Naphthalene, crude, dom., 74° tanks, frt. equald lb. .045 - —
78°, dms., c.l., same basis..lb. .059 - —
l.c.l., same basis.....lb. .0615- —
tanks, same basis.....lb. .05 - —
imp., 78°, large lots.....lb. .05 - —
refd., indust., dom., chipped or crushed, bgs., frt. equald. lb. .10½- —
flake, bgs., same basis..lb. .11½- —
tanks, same basis.....lb. .09¾- —
balls, flakes, wholesalers, jobbers, bbls., c.l., same basis. lb. .13¾- —
cs., 50 lbs., c.l., same basis..lb. .14 - —
1-lb. pkgs. c.l., same basis..lb. .16¼- —
a-Naphthol, bbls., frt. alld.....lb. 1.00 - —
b-Naphthol, resub., dms., works..lb. .78½- —
tech., bbls., c.l., works.....lb. .32½- —
l.c.l., works.....lb. .34½- —
Benzoate, fib. dms., works.....lb. 3.00 - —
custom contract, works....lb. 1.65 - —
Salicylate, dms.....lb. 5.00 - —
Sulfate, cns.....lb.35.00 - —
a-Naphthylamine, bbls., frt. alld..lb .50 - —
b-Naphthylamine, tech., obls., works. lb. 1.05 - 1.10
Neocinchophen, USP, dms., frt. adjusted lb. 7.00 - 8.00
Neomycin, fib. dms., 100-kilo lots, basis, activity, gram. .60 - —
1-kilo lots, basis, activity, gram. 1.20 - —
Nerolin, cns.....lb. 2.15 - 2.65
Niacin (see Acid, nicotinic).
Niacinamide (see Nicotinamide).
Nickel acetate, bbls., dlvd.....lb. .75 - .83¼
Carbonate, bbls., dlvd.....lb. .71 - .78
Chloride, bbls., dlvd.....lb. .37 - .45
Formate, bbls., ton lots, frt alld. lb. .64 - .68
Metal, electro cathodes cs, works. lb. .60 - —
Nitrate, bbls., works.....lb. .36 - .37
Oxide, black, bbls.....lb. .69 - —
Sulfate, bgs., c.l., dlvd.....lb. .29 - —
l.c.l., dlvd.....lb. .29½- .35
Nicotinamide, USP, dms., frt. adjusted kilo.12.00 -12.30
Hydrochloride, dms., frt. adjusted. kilo.11.50 -11.80
Nicotine sulfate, 40%, dealers, 50-lb. dms., frt. alld.....lb. 1.20 - —
manufacturers, 500-lb. dms., frt. alld. lb. 1.03 - —
Niger seed, bgs.....lb. .12½- .13
Nikethamide, cbys.....lb. 5.75 - 6.00
m-Nitroaniline, dms., frt. alld..lb. 1.05 - —
o-Nitroaniline, flaked, dms.....lb. .54 - .57
powd., dms.....lb. .60 - —
p-Nitroaniline, dms., l.c.l., frt. alld. lb. .51½- —
Nitrobenzene, dbl. dist., dms., c.l., frt. alld..lb. .12 - —
l.c.l., frt. alld.....lb. .13 - —
tanks, frt. alld.....lb. .11 - —

Methyl Chloride—a-Nitronaphthalene

o-Nitrobiphenyl, tech., dms., c.l., works lb. .14½- —
l.c.l., works.....lb. .15 - —
tanks, works.....lb. .13 - —
Nitrocellulose, ester-soluble, 30-35 cps., ¼, ½, ¾, 5-6, 15 20, 30-40, 60-80, 125-175, secs., bbls., c.l., works..lb. .34 - —
l.c.l., same basis...lb. .35 - .37
18-25 cps., bbls., c.l., same basis..lb. .36 - —
l.c.l., same basis...lb. .37 - .39
250-400, 600-1,000 secs., bbls., c.l., same basis..lb. .39 - —
l.c.l., same basis..lb. .40 - 42
spirit-soluble, 30-35 cps., ¼, ½, sec., bbls., c.l., same basis.lb. .41 - —
l.c.l., same basis...lb. .42 - .44
5-6, 40-60 secs., bbls., c.l., same basis lb. .40 - —
l.c.l., same basis lb. .41 - .43
Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Drums extra but returnable.
o-Nitrochlorobenzene, dms.....lb. .20 - .21
p-Nitrochlorobenzene, dms.....lb. .26 - .27
2-Nitro-4-chlorophenol, dms.....lb. .75 - —
Nitroethane, dms., dlvd. E of Rockies..lb. .25 - —
Nitrogen solution, tanks, frt. equald, 37-40.8% N, 100% basis..ton.128.00 - —
Nitrogenous process tankage, bulk, works..unit-ton. 3.75 Nom.
Sewage sludge, bulk, works unit-ton. 2.95 + .50
Nitromethane, dms., l.c.l., dlvd E. of Rockies lb. .23 - —
a-Nitronaphthalene, bbls, frt. alld. lb. .41 - —

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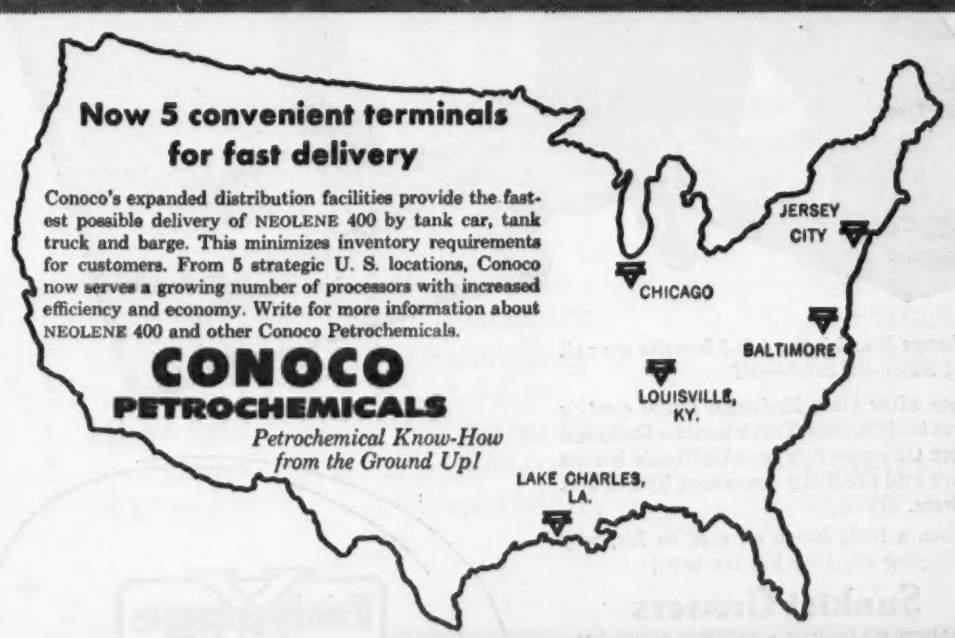
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Nitropropane—Oil, Red

Nitropropane 1, dms., dlvd. E. of Rockies	lb.	.23¼-	—
2, dms., dlvd. E. of Rockies	lb.	.25 -	—
l.c.l., works	lb.	.24¾-	—
tanks, works	lb.	.22¾-	—
o-Nitrophenol, dms., works, frt. equald	lb.	.94 -	—
p-Nitrophenol, dms., works, frt. equald	lb.	.50 -	—
o-Nitrotoluene, dms., c.l., frt. alld.	lb.	.10 -	—
l.c.l., frt. alld	lb.	.11 -	—
tanks, frt. alld	lb.	.09 -	—
p-Nitrotoluene, dms., works	lb.	.33 -	.36
m-Nitro-p-toluidine, dms	lb.	1.59 -	—
Nitrous ether, conc., bots 100-lb. lots	lb.	1.28 -	1.35
Nonyl phenol, dms., c.l., frt. alld.	lb.	.26 -	—
l.c.l., frt. alld	lb.	.27 -	—
tanks, frt. alld	lb.	.24 -	—
Nutgalls, Aleppo, bgs.	lb.	.38 -	—
Chinese, bgs	lb.	.45	Nom.
Nutmeg, East Indian, whole, bgs	lb.	.45 -	—
shrivels, bgs.	lb.	.45 -	—
West Indian, bgs.	lb.	.29½-	.30
Nux vomica, bis	lb.	.10 -	12
powd., bbls., bxs	lb.	.15 -	.17

O

Octane, indust., tanks, Bayonne, N. J	gal.	.19 -	—
Baytown, Tex	gal.	.15¾-	—
Borger, Tex	gal.	.15¾-	—
1-Octanol, tech., dms., c.l., dlvd	lb.	.35 -	—
l.c.l., dlvd	lb.	.37 -	—
tanks dlvd	lb.	.32½-	—
Octyl phenol, bgs., c.l., works	lb.	.23¼-	—
l.c.l., works	lb.	.23¾-	—
tanks, works	lb.	.22½-	—

Drum prices for octyl phenol are 1c. higher.

(Essential oils prices listed below are f.o.b. New York, with differences between high and low quotations due to differences in quantity, quality or in individual suppliers' views.)

Oil, abies, siberica, cns	lb.	2.80 -	3.10
Almond, artif., bitter (see Benzaldehyde).			
nat., bitter, F.P.A., bots	lb.	3.00 -	3.40
NF, bots.	lb.	3.25 -	3.75
sweet, USP, dms., cns	lb.	.55 -	.90
Allspice (see Oil, pimento).			
Amyris, dms.	lb.	1.40 -	1.65
Angelica root, bots	lb.	66.00 -	100.00
seed, bots	lb.	56.00 -	95.00
Aniline (see A).			
Anise, USP, dms	lb.	3.50 -	5.00
Apricot, kernel, USP, dms	lb.	.45 -	.50
Avocado, cns.	lb.	No stocks.	
Babassu, crude, tanks	lb.	No stocks	
Bay, NF, Puerto Rican, 50-55%, cns	lb.	1.55 -	2.00
55-60%, cns	lb.	1.65 -	2.10
West Indian, 50-55%, cns., dms.	lb.	1.45 -	2.25
Bergamot, nat., NF, Italian, cns.	lb.	10.90 -	13.00
Birchtar, crude, cns	lb.	1.50 -	1.90
rectified, NF, cns	lb.	2.00 -	—
Bois de rose, Brazil, dms	lb.	4.50 -	6.00
Mexican (see Oil, lignaloe wood).			
Bone, dms., works	lb.	.65 -	.70
Cajeput, native, cns	lb.	1.50 -	2.10
redist., USP, cns	lb.	2.40 -	2.80
Calamus, bots	lb.	12.00 -	20.00
Camphor, sassafrassy, dms	lb.	.38 -	.55
white, dms.	lb.	.31 -	.45
Oil, cananga, native, cns	lb.	7.85 -	10.25
rectified, cns.	lb.	12.50 -	14.75
Caraway, NF, cns	lb.	3.50 -	5.00
Capsicum (see Capsicum oleoresin).			
Cardamom, NF, bots	lb.	36.00 -	50.00
Cassia, USP (see Oil, cinnamon, USP).			
Castor, blown, dms., c.l.	lb.	.20 -	—
l.c.l.	lb.	.2150-	—
dehydrated, bodied, dms., c.l.	lb.	.2260-	—
l.c.l.	lb.	.2310-	—
tanks	lb.	.2160-	—
unbodied, dms., c.l.	lb.	.2110-	—
l.c.l.	lb.	.2160-	—
tanks	lb.	.2010-	—
hydrogenated, bgs., l.c.l.	lb.	.2350-	.2450
No. 3, tech., dms., c.l.	lb.	.1775-	—
l.c.l.	lb.	.1825-	—
tanks	lb.	.1675-	—
No. 1, Brazilian, tanks	lb.	.15 -	.15½
sulfonated, 50%, dms., l.c.l.	lb.	.13½-	.14
75%, dms., l.c.l.	lb.	.17 -	.17½
USP, dms., c.l.	lb.	.1800-	—
l.c.l.	lb.	.1850-	—
tanks	lb.	.1700-	—
refd. and deodorized, dms., c.l.	lb.	.1950-	—
l.c.l.	lb.	.20 -	—
tanks	lb.	.1850-	—
Cedarleaf, cns., dms	lb.	2.65 -	3.00
Cedarwood, cns., dms	lb.	1.00 -	1.65
Celery seed, bots	lb.	13.00 -	21.00
Chamomile, blue, Hungarian bots.	lb.	175.00 -	280.00
Chinawood (see Oil, tung).			
Cinnamon bark, bots	lb.	28.00 -	50.00
leaf, cns.	lb.	1.75 -	2.25
USP, cns., dms., (Cassia)	lb.	No stocks.	
Citronella, Ceylon, cns., dms	lb.	1.25 -	1.75
Java, true, dms	lb.	1.35 -	1.75
Java-type, cns	lb.	1.35 -	1.75
Clove, buds, USP, cns., dms	lb.	3.75 -	4.60
leaf, unrectified, dms	lb.	1.70 -	2.20
Oil, coconut, crude, tanks, N. Y.	lb.	.13¼-	—
Pac. Coast	lb.	.12¼-	—
refd., Cochin type, tax incl. frt. dms., l.c.l.	lb.	.20¾-	—
deodorized, tax incl., non-ret. dms., c.l.	lb.	.22½-	—
Cod, Newfoundland, dms	lb.	.09¼-	.09½
Codliver, USP, dms	gal.	1.50 -	1.60
Copaiba, cns	lb.	1.80 -	2.50
Coriander, USP, bots	lb.	14.75 -	18.00
Corn, crude, tanks, works	lb.	.13¼-	—
foots (soapstock), acid 95%, tanks, N. Y.	lb.	.04⅝-	—
refd., salad, dms	lb.	.18 -	.18½
tanks	lb.	.16½-	—
Costus, bots.	oz.	9.00 -	—
Cottonseed, crude, tanks, South-East	lb.	.12¾-	.12⅞
Valley	lb.	.12½-	.12⅝
Texas	lb.	.12½-	.12¼
foots (soapstock), acid 95%, tanks, N. Y.	lb.	.04⅜-	—
raw, 50%, tanks, same basis.	lb.	.02¼-	—
refd., salad, dms	lb.	.17¾-	.18
tanks	lb.	.16¼-	—

Creosote (see Creosote, coaltar).

Crude (see Petroleum, crude).			
Cubeb, cns	lb.	4.50 -	6.00
Cumin, bots., cns.	lb.	4.15 -	5.75
Cypress, bots.	lb.	5.30 -	—
Degras (see D).			
Dillseed, bots.	lb.	2.80 -	4.25
Dillweed, dom., bots., dms.	lb.	3.75 -	5.30
Dip (see D)			
Erigeron, cns.	lb.	5.50 -	7.50
Eucalyptus, NF, rectified, 70-80%, dms.	lb.	.67 -	1.00
80-90%, dms.	lb.	.85 -	1.25
Fennel, sweet, USP, cns.	lb.	2.30 -	3.25
Fir, Canada, cns	lb.	2.35 -	2.80
Fish, refd., alkali, dms.	lb.	.1400-	.1450
kettle-bodied, dms.	lb.	.1630-	.1680
light-pressed, dms.	lb.	.1250-	.1300
tanks	lb.	.1100-	—

Fishliver, crude, for feeds or concentrating, 4,000 to 12,000 A units per gram, dms., 1,000,000 units. .08 - .09
10,000 to 20,000 A units per gram, dms., 1,000,000 units. .09 - .10
25,000 to 35,000 A units per gram, dms., 1,000,000 units. .09 - .10
40,000 to 55,000 A units per gram, dms., 1,000,000 units .10½- .11
100,000 A units per gram, dms. 1,000,000 units. .12 - .14
200,000 A units per gram, dms 1,000,000 units. .12 - .14
300,000 A units per gram, dms. 1,000,000 units. .12 - .14¼
400,000 A units per gram, dms., 1,000,000 units. .12 - .14½
500,000 A units per gram, dms. 1,000,000 units. .12 - .14½

Prices above are based on the USP XIV method of conversion, Morton-Stubbs Corrected E x 1900.

Fusel (see F).			
Garlic, pure, bots	oz.	6.50 -	9.50
Gaultheria (see Oil, wintergreen).			
Geranium, Algerian, cns	lb.	10.50 -	12.25
Bourbon, cns.	lb.	11.25 -	14.50
Turkish (see Oil palmarosa)			
Ginger, dist., bots	lb.	12.25 -	17.50
Grapefruit, dms.	lb.	2.50 -	3.25
Grease, No. 1, dms	lb.	.13 -	.13½
extra, winter, strained, dms.	lb.	.16½-	.17
prime, burning, dms.	lb.	.17½-	.18
Guaiacwood, cns	lb.	1.40 -	1.90
Hemlock, cns.	lb.	2.70 -	3.80
Juniper berry, NF, VIII, bots.	lb.	2.75 -	4.00
twice rectified, bots	lb.	3.60 -	7.00
Tar, NF (see Juniper tar).			
Wood, tech., cns	lb.	.42 -	.65
Lard (see Oil, grease).			
Laurel leaf, dms., cns.	lb.	9.75 -	12.50
Lavandin, dms., cns	lb.	2.50 -	4.85
Lavender, flower, USP, French,			
30-32% ester, cns	lb.	3.55 -	4.60
38-40% ester, cns	lb.	9.50 -	13.20
40-42% ester, cns	lb.	10.00 -	15.00
Spike, Spanish, cns	lb.	1.75 -	2.15
Lemon, USP, Calif., cns., dms.	lb.	5.25 -	6.50
Messina, cns.	lb.	6.05 -	9.25
terpeneless, bots	lb.	32.00 -	85.00
Lemongrass, cns., dms	lb.	2.50 -	3.25
Lignaloe wood, Mex., cns	lb.	3.70 -	4.50
Lime, dist., Mexican, cns	lb.	3.75 -	6.00
West Indian, cs	lb.	4.45 -	7.25
expressed, West Indian, cns.	lb.	7.75 -	8.50
terpeneless, bots.	lb.	29.50 -	100.00
Linseed, raw, dms., c.l., N. Y.	lb.	.1625-	—
l.c.l.	lb.	.1675-	.1700
tanks, f.o.b. Minneapolis	lb.	.1350-	—
New York	lb.	.1475-	—
tankwagon, New York	lb.	.1505-	—
Boiled linseed oil, .006c. per lb. higher.			
Mace, dist., cons., dms	lb.	2.75 -	3.60
Mandarin (see Oil, tangerine).			
Menhaden, crude, tanks, works, Atlantic Coast	lb.	.68	Nom.
Gulf ports	lb.	.08¼	Nom.
Mineral, white (see Oil, white mineral)			
Mirbane (see Nitrobenzene).			
Mustard seed, nat., dms.	lb.	.18	Nom.
synthetic, cans, dms.	lb.	1.60 -	1.85
Neatsfoot, 15° cold test, dms.	lb.	.33 -	.34
20° cold test, dms.	lb.	.32 -	.33
30° cold test, dms.	lb	.30 -	.31
Neroli, NF, French, bots	lb.	85.00 -	260.00
Spanish, bots	lb.	35.00 -	85.00
Nutmeg, USP, dist., East Indian, cns., dms.	lb.	2.75 -	3.25
West Indian, cns., dms.	lb.	2.60 -	2.85
Ocotea, cymbarum, dms	lb.	1.10 -	1.50
Oiticica, liquid, dms	lb.	.16¾-	.17
tanks	lb.	.15¼-	.15¼
Oleo, extra, dms	lb.	.19 -	.19⅛
Olibanum, bots.	lb.	5.50 -	7.65
extra fine, bots	lb.	8.00 -	—
Olive, Spanish, edible, dms., duty paid	gal.	2.35 -	2.45
Orange, sweet, dist., cns	lb.	.40 -	.50
expressed, USP, Brazilian, cns., dms	lb.	No stocks.	
Calif., cns., dms.	lb.	.60 -	1.25
Florida, cns., dms	lb.	.45 -	1.25
Messina, cns	lb.	3.65 -	5.85
West Indian, cns., dms	lb.	2.50 -	3.65
sesquiterpeneless, bots	lb.	65.00 -	120.00
Origanum, Spanish, cns	lb.	1.95 -	2.85
Palm, clarif., dms	lb.	.12½-	.12¾
kernel, denat., tanks	lb.	.12½-	—
Palmarosa, cns.	lb.	8.00 -	9.50
Paraffin, pale, 100-110 vis., at 100°F. tanks, East Coast refy.	gal.	.14 -	—
Patchouli, dms	lb.	8.00 -	9.50
Peach kernel, USP, (see Oil apricot kernel).			
Peanut, crude, tanks, f.o.b. mills.	lb.	.20¾-	—
refd., dms.	lb.	.26 -	.26¼
tanks	lb.	.24½-	—
Pennyroyal, USP, imported, cns	lb.	1.90 -	2.50
	lb.	1.60 -	2.40
Peppermint, nat., dms	lb.	7.75 -	8.65
redist., USP, dms	lb.	8.10 -	9.25
Persic, USP (see Oil, apricot kernel).			
Petitgrain, South American, cns., dms.	lb.	4.25 -	5.30
Pimento, berry, NF, dms	lb.	6.00 -	6.50
leaf, cns.	lb.	2.55 -	3.10
Pine, dest-dist., dms., l.c.l., works.	lb.	.11¼-	—
ex-whse.	lb.	.13¾-	—
steam dist., dms., ex whse., N.Y.C.	lb.	.151 -	—
Pineneedle, Siberian (See Oil, abies siberica).			
Rapeseed, tankcars	lb.	.17¼-	—
Red (see Acid, oleic).			

Exchange Brand is the 4-to-1 favorite over all other lemon oils *combined!*

Year after year, Exchange Brand *quality* proves itself in sales. That's because Exchange Lemon Oil comes only from California lemons grown and skillfully processed by Sunkist Growers.

When a little lemon oil goes so far, why risk buying anything but the best?

Sunkist Growers

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Distributed in the U. S. exclusively by
FRITZSCHE BROTHERS, INC.
76 Ninth Ave., New York 11, N. Y.
DODGE & OLCOTT, INC.
180 Varick St., New York 14, N. Y.

Exchange
OIL OF LEMON U.S.P.

Oil, rice bran, clarif., dms., l.c.l. lb. .17 Nom.
tanks, dlvd. E. lb. .15½ Nom.
Rose, nat., Bulgarian, bots. oz. 43.50 -62.25
Rosemary, Spanish, USP, cns., dms. lb. .65 - 1.00
tech., cns., dms. lb. .50 - 70
Rue, bots. lb. 1.65 - 2.30
Safflower, dms., c.l., Atl. coast. lb. .1910- —
tanks, same basis lb. .1760- —
Sage, clary bots lb. 20.00 -25.00
Dalmatian, cns. lb. 4.75 - 7.25
Spanish, cns. lb. .90 - 1.25
Sandalwood, NF, cns lb. 11.50 -13.00
Sardine, crude, tanks, Pac. coast. lb. No stocks.
Sassafras, artif., dms lb. .90 - 1.10
nat., Brazilian (see Oil ocotea cymbarum).
dom., USP, cns., dms lb. 1.75 - 2.20
Savin, cns. lb. 2.75 - —
Savory, cns lb. 4.25 - —
Sesame, refd., dms lb. .36 - .37
Shingle stain, tar distillate, dms., c.l., works lb. .33 - —
l.c.l., works lb. .35 - —
tanks, works lb. .23 - —
Snakeroot, Canada, cns. lb. 28.50 -31.00
Soybean, crude, tanks, Decatur lb. .12⅛- —
foots (soapstock), acid 95%, tanks, N. Y. lb. .05⅝- —
raw, 50%, tanks, N. Y. lb. .02⅝- —
refd., alkali, dms. lb. .16⅛- .16½
tanks lb. .14⅝- —
clarified, dms. lb. .15⅝- .15⅞
tanks lb. .14⅛- —
salad, dms. lb. .16⅝- .16¾
tanks lb. .14⅞- —
Spearmint, USP, dms lb. 3.85 - 5.50
Sperm, bleached winter, 45°, dms. lb. .1625- .1650
tankcars lb. .1450- —
nat., winter, 45°, dms lb. .1525- .1550
tankcars lb. .1350- —
Spruce, cns., dms lb. 2.10 - 2.75
Sweet birch, USP, Northern, cns. lb. 4.25 - 9.50
Southern, cns lb. 2.50 - 3.00
Tall, crude, dms., c.l. works lb. .03 - —
tanks, works lb. .02 - —
dist., dms., c.l., works lb. .07¼- .07½
tanks, works lb. .06 - —
refd., dms., c.l., works lb. .06¼- —
l.c.l., works lb. .06½- —
tanks, works lb. .05 - .05¼
Tallow, acidless, dms lb. .10¼ - .10½
Tangerine, Floridian, dms lb. 2.75 - 5.35
Tansy, dms. lb. 7.75 - 9.00
Tar, pine, coml., dms., c.l., works, gal. .42½- —
l.c.l., works gal. .50½- —
whse lb. .067⅝- —
tanks, works gal. .33½- —
rectified, NF, dms., incl., l.c.l., works, South gal. .90 - —
white, V. gal. 1.00 —
Tar acid (see Phenol).
Theobroma (see Cocoa butter).
Thyme, NF, red, cns., dms lb. 1.70 - 3.75
white, cns lb. 1.95 4.00
Vern. white, cns lb. 40 1.85
Tung, dms., c.l., N. Y. lb. .22¾- —
l.c.l., same basis lb. .24¼- 24¾
tanks, N. Y. lb. .21¼- —
domestic mills lb. 21½ Nom.
Turkey red (see Oil, castor, sulfonated).
Turpentine, NF, cns. dms lb. 40 45
Vetiver, Bourbon, cns lb. 14.00 -17.50
Haitian, cns lb. 11.80 -21.00
Java, cns. lb. 22.50 -40.00
Wheat germ, 5-gal dms gal. 10.00 -13.00
White mineral, tech., 50-65 vis., non-ret. dms., c.l., f.o.b. N. Y. gal. .51½- .54½
65-75 vis., non-ret., dms., c.l., same basis gal. 52½- .55
l.c.l., same basis gal. .57½- .58½
80-90 vis., non-ret., dms., c.l., same basis gal. .53½- .56½
l.c.l., same basis gal. .53½- .59½
125-135 vis., non-ret., dms., c.l., same basis gal. .59½- .62½
l.c.l., same basis gal. .64½- .65½
145-155 vis., non-ret., dms., c.l., same basis gal. .66 - .68½
l.c.l., same basis gal. .71 - .71½
175-185 vis., non-ret., dms., c.l., same basis gal. .69½- .73
l.c.l., same basis gal. .74½- .75
USP, 200-210 vis., non-ret., dms., c.l., same basis gal. .73½- .75
l.c.l., same basis gal. .77½- .78
345-355 vis., non-ret., dms., c.l., same basis gal. .77 - .80
l.c.l., same basis gal. .83 - .85
Wintergreen, USP, nat., Northern, cns lb. 6.35 -10.30
Southern, cns lb. 3.20 -19.50
synthetic (see Methyl salicylate).
Wood (see Oil, tung).
Wormseed, cns. lb. 6.60 - 8.00
Wormwood, cns. lb. 5.00 - 6.85
Ylang-ylang, Bourbon, bots. lb. 17.00 -30.00
extra, bots lb. 28.00 -40.00
Madagascar, bots lb. No stocks
Oleostearine, bbls. lb. .14 - .14½
Opium, USP, cns lb. 19.20 -19.45
gran., USP, cns lb. 21.55 -21.90
powd., USP, cns lb. 21.65 -21.90
Orange, cadmium lithopone, bbls., frt. alld. E. of Rockies lb. 1.56 - —
Chrome, CP., bbls., dlvd. N of Tenn. and N. C., E. of Miss. R., include Davenport, Tenn., and E. of Minneapolis, Rock Island, St. Louis, St. Paul lb. .31 - —
Chrome orange prices are ½c. higher dlvd. Ala., Fla., Ga., La. (Shreveport), 1½c. Miss., N. C., S. C., Tenn., Dallas and Ft. Worth, Tex., 1½c. El Paso, Tex., 2c. Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph, 1.6c. higher dlvd. Pac. Coast, for Denver, Pueblo, Salt Lake City, Wichita prices are equalized with Chicago.
Dinitroaniline toner lb. 1.30 - —
Mineral, American, bbls., l.c.l., works lb. .2035- .2060
Molybdated, bbls. lb. .44 - —
o-Nitroaniline toner, kgs lb. 1.15 - —
Orange peel bitter, Haitian, bls lb. .14 - .16
sweet, bls lb. .16 - .18
Orris root, Florentine, bls lb. .45 - .50
powd., bbls., bxs lb. .50 - .53
Verona bls lb. .35 - .40
powd., bbls., bxs lb. .40 - .45
Orthoaminobiphenyl (see o-Aminobiphenyl).
Orthoanisidin (see o-Anisidine).
Orthochloroanilin (see o-Chloroaniline).
Orthochlorobenzaldehyde (see o-Chlorobenzaldehyde).
Orthochloroparanitroanilin (see 2-Chloro-4-nitroaniline).
Orthochlorophenol (see o-Chlorophenol).
Orthocresol (see o-Cresol).
Orthodichlorobenzene (see o-Dichlorobenzene).
Orthonitroanilin (see o-Nitroaniline).
Orthonitrochlorobenzene (see 2-Nitro-4-chlorobenzene).
Orthonitrobiphenyl (see o-Nitrobiphenyl).
Orthonitroparachlorophenol (see 2-Nitro-4-chlorophenol).
Orthonitrophenol (see o-Nitrophenol).
Orthonitrotoluene (see o-Nitrotoluene).
Orthophenetidin (see o-Phenetidine).
Orthophenetidin (see o-Phenetidine).
Ortho-tertiary-amylphenol (see o-tert-Amylphenol).
Orthotolidin (see o-Tolidine base).
Orthotoluidin (see o-Toluidine).
Osage orange, cryst., No. 1, bbls., l.c.l lb. .40 - —
extract, liq., No. 1, bbls., l.c.l lb. .19 - —

Ouabain, USP, bots. gram. 3.00 - 4.00
Oxyquinolin sulfate, cns., 100-lb. lots, works lb. 4.75 - 5.00
smaller lots, works lb. 4.92 5.17

P

Pancreas substance, assay 1:75 bots., 5-lb. lots or more lb. 4.00 - —
Pancreatin, USP, bots lb. 1.90 - 2.10
Papain, USP, African, bots lb. 4.00 - 4.50
Ceylon lb. 3.00 - 3.50
Papaverine, nat. or syn. hydrochloride, USP, cns., 25 oz. to 100 oz. lots oz. 5.00 - —
smaller lots oz 5.05 5.20
Sulfate, cns. oz. 7.10 - 7.35
Paprika, Roumanian, bgs lb. .31 - .33
Spanish, bgs. lb. .37 - .39
Yugoslavian, bgs. lb. .38 - —
Para-anisidin (see p-Anisidine).
Para-acetylaminobenzaldehyde thiosemicarbazone (see p-Acetylaminobenzaldehyde thiosemicarbazone).
Para-aminophenol (see p-Aminophenol).
Parachloroanilin (see p-Chloroaniline).
Parachlorobenzaldehyde (see p-Chlorobenzaldehyde).
Parachloro-orthonitroanilin (see 4-Chloro-2-nitroaniline).
Parachlorophenol (see p-Chlorophenol).
Paracresol (see p-Cresol).
Paradibromobenzene (see p-Dibromobenzene).
Paradichlorobenzene (see p-Dichlorobenzene).
Paraffin, crude scale, white, 121°-123°F, ASTM, solid c.l., ref'y lb. .0710- —
Paraffin, fully refd., 122°-124°F, ATSM, slabs loose, c.l., ref'y lb. .0845- —
125°-127°F, ASTM, slabs loose, c.l., ref'y lb. .0845- —
130°-132°F., ASTM, slabs loose, c.l., ref'y lb. .0855- —
132°-134°, ASTM, slabs, loose, c.l., ref'y lb. .0855- —
135°-137°F., ASTM, slabs loose, c.l., ref'y lb. .0855- —
Prices for paraffin in bags and cns., c.l. 7/10c. per lb higher; 1,000 to 9,999 lbs., 2.7c per lb higher and under 1,000 lbs., 3.7c per lb. higher
AMP temperatures are an arbitrary 3° F higher than ASTM.
Paraformaldehyde, 91% flake, bgs., c.l., frt. alld lb. .10¾- —
l.c.l., frt. alld lb. .12¼- —
powd., bgs., c.l., frt. alld lb. .15½- —
l.c.l., frt. alld lb. .17 - —
USP X, fib. dms., c.l. lb. .183 - —
10,000-lb. lots lb. .193 - —
1,000-lb. lots lb. .193 - —
smaller lots lb 208 —
Paraldehyde, tech. 98% 55-gal dms., c.l. works lb. .13½- —
l.c.l., works lb. .14½- —
tanks, works lb. .11½- —
Paranitroanilin (see p-Nitroaniline).
Paranitrochlorobenzene (see 4-Nitro-2-chlorobenzene).
Paranitrophenol (see p-Nitrophenol).
Paranitrotoluene (see p-Nitrotoluene).
Paraphenetidin (see p-Phenetidine).
Paraphenylenediamine (see p-Phenylenediamine).
Paraphenylphenol (see p-Phenylphenol).

Oil, Rice Bran—Pepper, Red, Japanese

Para-tertiary-amylphenol (see p-tert-Amylphenol).
Para-tertiary butylphenol (see p-tert-Butylphenol).
Parathion, spray powder, 15% dealers, dms., works lb. .48 .49
tech., dms., works lb. 1.62 1.64
Paratoluenesulphonamide (see p-Toluenesulfonamide).
Paratoluidine (see p-Toluidine).
Paris green, dealer, distributor, dms. c.l., works, frt. alld. on 96 lbs or over lb. .36 .40
l.c.l., same basis lb. .37 .53
Passion flower herb, bls lb .20 .21
Peanut meal, 45%, old process, bgs., mills ton. 84.00 Nom.
Pectin, citrous, NF, powd, bbls lb 2.05 2.06
tech, powd, bbls lb 1.50 —
imported, Danish, ex whse lb. 1.28 —
Penicillin, crystalline, potassium, sterile, bulk, 1,000,000 units. .07½- .08
Procaine, bulk, 1,000,000 units. .07½- .08
Sodium, sterile, bulk, 1,000,000 units. .07½- .08
Pentachlorophenol, dms., c.l., works, frt equald b 21 —
l.c.l., same basis lb. .24 - .29
truckload, 20,000 lbs. min. same basis lb. .21¼- —
Pentaerythritol, tech., bgs., c.l., works lb. .32 - —
l.c.l., works lb. .33 - —
Di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).
Pentane, industrial, tanks, Tex., refy gal. .14¼- —
Pepper, black, Malabar, spot, bgs lb. .50 - —
red, Gondar, spot, bgs lb. .29 - .30
Japanese, hontaka, bgs lb. .35 - —
birdseyes, bgs., new crop lb. .60 - —

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- LEMON
- LEMONGRASS
- ORIGANUM
- PATCHOULY
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Stocks Carried in Principal Cities

Pepper, Red, Mombasa—Poke Root

Pepper, red, Mombasa, bgs., ship't.	lb.	Nominal
Nigerian, bgs	lb.	Nominal.
Turkish, bgs	lb.	.22 - .22½
white, bgs.	lb.	.66 - —
Peppermint leaves, USP, dom., bls., dms	lb.	.70 - .75
imp., bls	lb.	1.25 - —
Pepsin, NF, 1:3,000 bulk	lb.	3.45 - 3.50
Perchloroethylene, dms., c.l., or truckloads, dlvd. E	dm.	85.00 - —
dlvd. W	dm.	88.50 - —
l.c.l., dlvd. E	dm.	95.00 - —
dlvd., W	dm.	98.50 - —
tanks, dlvd. E	lb.	.10¾- —
dlvd. W	lb.	.11¼- —
Peru balsam, dms	lb.	1.30 - 1.70
Petrolatum, amber, dms., c.l., refy.	lb.	.05 - .05¾
l.c.l., dlvd	lb.	.06¾- .07
tanks, refy	lb.	.03¼- .04⅛
cream, dms., c.l., refy	lb.	.06⅛- .07⅛
l.c.l. dlvd	lb.	.08⅛- .08¾
tanks, refy	lb.	.04⅜- .05⅝
extra, amber, dms., c.l., rfy	lb.	.05¼- .05⅞
l.c.l., dlvd	lb.	.07 - .07¼
tanks, refy	lb.	.02½- .04⅜
USP, white, lily, dms., c.l., refy.	lb.	.06⅝- .07¼
l.c.l. dlvd	lb.	.08⅞- .09⅛
tanks, refy	lb.	.04⅞- .06
snow, dms., c.l., refy	lb.	.07⅛- .07¾
l.c.l., dlvd	lb.	.09⅜- .09⅝
tanks, refy	lb.	.05⅜- .05⅞
soft, dms., c.l., refy	lb.	.06¾- .07¾
l.c.l., dlvd	lb.	.08½- .08¾
tanks, refy	lb.	.05 - .05½
yellow, soft, dms., c.l., refy.	lb.	.05¼- .05¾
l.c.l., dlvd	lb.	.06⅞- .07⅛
tanks, refy	lb.	.03½- .05⅛

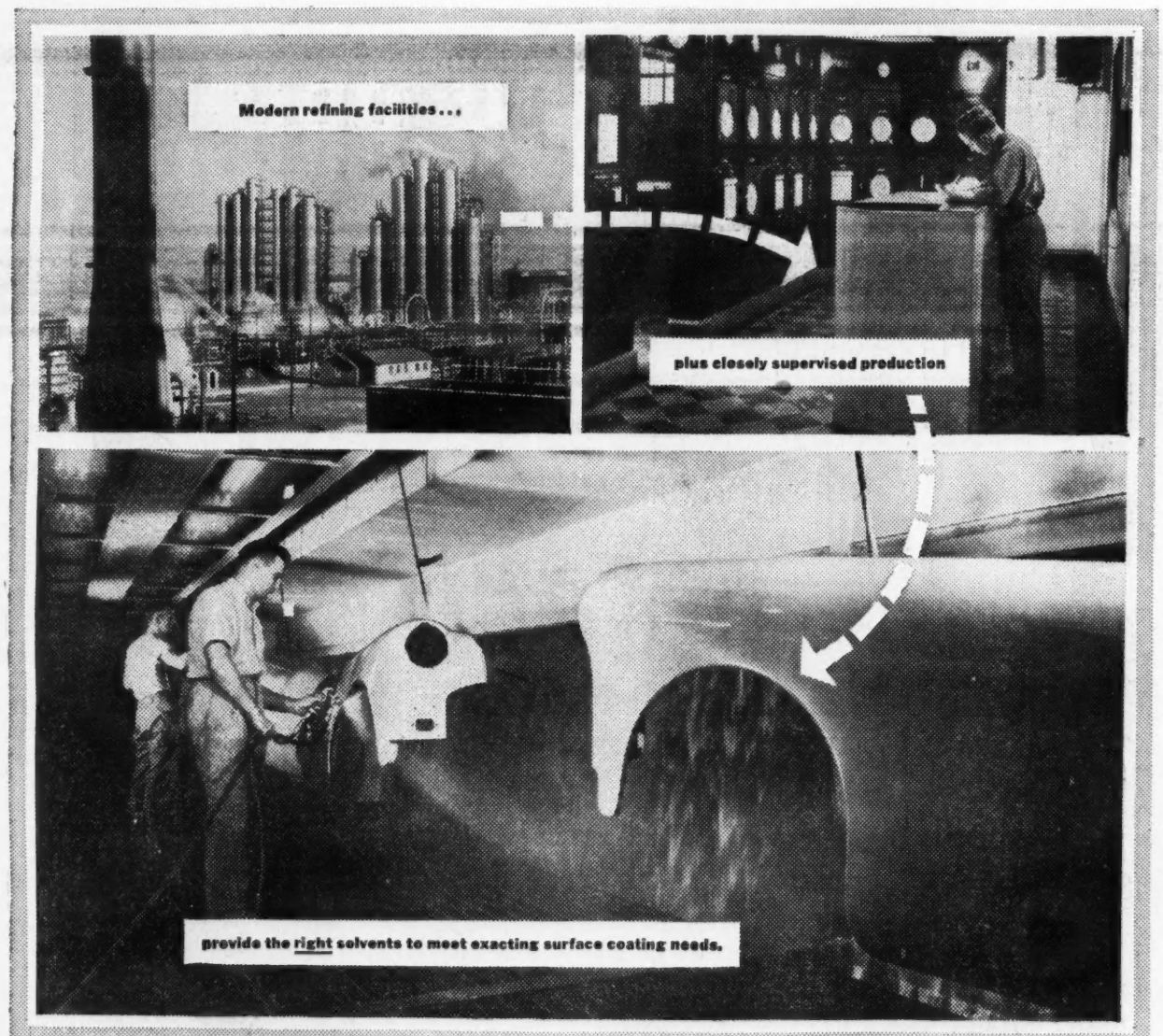
Petroleum, lacquer diluent, 150°-240°F., b.r., tanks, West Coast, ex tax, Los Angeles	gal.	.169 - .204
East coast, N. J., N. Y.	gal.	.19 - —
Group 3, benzol-type	gal.	.14125- .14625
toluol-type	gal.	.13125- .13375
Mineral spirits, reg., tanks, California, ex tax, San Francisco	gal.	.164 - —
East coast, N. J., N. Y.	gal.	.17 - —
Group 3	gal.	.11875- —
tankwagon, Boston	gal.	.19 - —
Buffalo	gal.	.195 - —
Chicago	gal.	.279 - —
Cleveland	gal.	.22 - —
Newark	gal.	.18 - —
New York	gal.	.18 - —
Philadelphia	gal.	.185 - —
Pittsburgh	gal.	.18 - —
Providence	gal.	.195 - —
specially refd., tanks, refy, Watson, Calif	gal.	.245 - —
Borger, Tex	gal.	.24 - —
Houston, Tex	gal.	.24 - —
Wood River, Ill	gal.	.2625- —
dlvd. N. J	gal.	.32 - —
dlvd. N. Y	gal.	.33½- —
tankwagon, N. J., dlvd	gal.	.36 - —
N. Y., dlvd	gal.	.37 - —
Naphtha, cleaners, tanks, East Coast, N. J., and N. Y.	gal.	.17 - —
Group 3	gal.	.12875- —
tankwagon, Newark	gal.	.18 - —
New York	gal.	.18 - —
Philadelphia	gal.	.185 - —
High solvency (see Petroleum solvent, partial aromatic).		

Petroleum, naphtha, V.M.&P., 225°-300°F, b.r., tanks, West Coast, Los Angeles	gal.	.169 - —
Portland, Ore	gal.	.175 - —
San Francisco	gal.	.174 - —
Seattle, Wash	gal.	.175 - —
East Coast, N. J., N.Y.	gal.	.18 - —
Group 3	gal.	.12875- —
tankwagon, Boston	gal.	.205 - —
Chicago	gal.	.289 - —
Cleveland	gal.	.23 - —
Newark	gal.	.195 - —
New York	gal.	.195 - —
Philadelphia	gal.	.20 - —
Pittsburgh	gal.	.19 - —
Solvent, partial aromatic, tanks, East Coast, N. J., N. Y., 205°-284° F., b.r., 38° 43°C, m.a.p.	gal.	.24 - .26
19°-30°C. m.a.p.	gal.	.19 - .30
272°-387°, b.r., 31°C. m.a.p.,	gal.	.29 - —
27°-29°C, m.a.p	gal.	.29 - .31
19°C., m.a.p	gal.	.32 - —
310°-392°F. b.r., 30°-38°C. m.a.p.	gal.	.27 - .30
17°-19°C., m.a.p	gal.	.35 - .38
350°-425° F., b.r., 32°-35° C., m.a.p	gal.	.30 - .30½
25°C., m.a.p	gal.	.39 - —
18°-21°C., m.a.p	gal.	.35 - .42½
Rubber, tanks, Cal., ex tax, San Francisco	gal.	.173 - —
East Coast, N. J., N. Y.,	gal.	.18 - —
Group 3	gal.	.12875- —
Stoddard, tanks, East Coast, N. J., N. Y	gal.	.17 - —
Group 3	gal.	.12375- —
Pennsylvania, western	gal.	.15 - —

Petroleum, solvent, Stoddard tankwagon, Boston	gal.	.19 - —
Chicago	gal.	.289 - —
Cleveland	gal.	.22 - —
Los Angeles, ex tax	gal.	.194 - —
Newark	gal.	.18 - —
New York	gal.	.18 - —
Philadelphia	gal.	.185 - —
Pittsburgh	gal.	.18 - —
Sulfonate, oil soluble, 60-62% sulfonic content, non-ret. dms., c.l., works	lb.	.16 - .18¼
l.c.l., works	lb.	.17 - .18½
tanks, works	lb.	.14 - .16½
50-55% sulfonic content, non-ret. dms., c.l., works	lb.	.15½- —
l.c.l., works	lb.	.16½- —
tanks, works	lb.	.12½- —
o-Phenetidine, dms., works	lb.	1.00 - —
p-Phenetidine, dms., works	lb.	1.00 - —
Phenobarbital, USP, dms., 100-lb. lots	lb.	4.00 - —
Phenobarbital-sodium, USP, dms., 100-lb. lots	lb.	4.00 - —
Phenol, 90-92% (cresol 8-10%), non-ret. dms. c.l. frt. alld E. of Rockies	lb.	.15¾- —
l.c.l., same basis	lb.	.16½- —
tanks, same basis	lb.	.14 - —
82-84% (cresol 16-18%), non-ret. drums, c.l., same basis	lb.	.15¼- —
l.c.l., same basis	lb.	.16 - —
tanks, same basis	lb.	.13½- —
39° or above, tar distilled, non-ret. dms., c.l., same basis	lb.	.17¼- .17¾
l.c.l., same basis	lb.	.18 - .18½
tanks, same basis	lb.	.15½ - —
USP, syn., dms., c.l., frt. alld.	lb.	.17¾- —
l.c.l., same basis	lb.	.18½- —
tanks, same basis	lb.	.16 - —
Phenolphthalein, USP, or yellow, bbls., dms., 2,000-lb. lots.	lb.	1.10 - —
smaller lots	lb.	1.12 - 1.17
Phenothiazine, NF, fib. dms., c.l., frt. adjusted	lb.	.53 - —
over 2,100 lbs., same basis	lb.	.55 - —
less than 2,100 lbs., same basis.	lb.	.57 - —
Phenyl acetate, dms., 100-lb. lots, works	lb.	.50 - —
Salicylate (see Salol.)		
Phenylacetaldehyde, soln., 50%, bots	lb.	2.40 - 2.70
100%, bots	lb.	4.00 - 4.65
Phenylacetamide, 125-lb. dms., works	lb.	1.10 - —
smaller dms., works	lb.	1.15 - 1.10
dl-Phenylalanine, dms., works	lb.	27.00 - 37.50
1-Phenyl-3-carbethoxy pyrazolone-5, 250-lb. fib. dms., dlvd. E	lb.	3.60 - —
smaller dms., dlvd. E	lb.	4.00 - —
Phenyldiethanolamine, dms., c.l., dlvd E.	lb.	.40 - —
l.c.l., dlvd. E	lb.	.41 - —
m-Phenylenediamine, dms., frt. alld.	lb.	.90 - —
p-Phenylenediamine, redist., dms., works	lb.	2.00 - —
tech., refd., dms., same basis	lb.	1.10 - 1.35
Phenylethanolamine, dms., c.l., works	lb.	.89½- —
l.c.l. same basis	lb.	70 - —
Phenylethyl acetate, bots	lb.	1.35 - 1.95
b-Phenylethylamine, dms., works, 1,000-lb. lots	lb.	1.10 - —
smaller lots, works	lb.	1.15 - 1.40
Phenylethyl(phenyl) acetate, bots	lb.	3.95 - 4.40
Phenylhydrazine base, CP, bots	lb.	3.00 - 3.07
Hydrochloride, coml., kgs., works.	lb.	1.75 - —
purif., bots., works	lb.	5.17 - —
1-Phenyl-3-methyl pyrazolone-5, 250-lb. lots, dlvd. E	lb.	1.70 - —
smaller lots, dlvd	lb.	2.00 - —
o-Phenylphenol, dms., l.c.l., works	lb.	.42 - .44
p-Phenylphenol, bgs., c.l., works	lb.	.35 - —
l.c.l., works	lb.	.39½- —
Phloroglucinol, coml., fib. dms., works	lb.	6.40 - —
C.P., bots., fib. dms., works	lb.	17.00 - 17.25
tech., fib. dms., works	lb.	10.45 - —
Phosphate, defluorinated (see under D).		
Rock, Curacao, Atlantic ports, New Orleans	ton.	43.00 - —
Florida, land pebble, run-of-mine, washed, dried unground, bulk, c.l., mines, 68-66%, b.p.l., bulk, c.l., mines	long-ton.	4.69 - —
70-68%, b.p.l., c.l., same basis	long-ton.	5.09 - —
72-70%, b.p.l., c.l., same basis	long-ton.	5.74 - —
75-74% b.p.l., c.l., same basis	long-ton.	6.74 - —
78-76%, b.p.l., c.l., same basis	long ton.	7.74 - —

The above prices are based on fuel oil at $2.15 per bbl. and labor at $1.28, recent 3c. labor advance currently absorbed.

Phosphorus amorph., red, cs	lb.	.46 - .47
dms.	lb.	44 - .45
yellow, cns., works	lb.	.48 - .50
dms., c.l., works	lb.	.40 - —
l.c.l., works	lb.	.43 - —
Oxychloride, dms., c.l., works	lb.	.14 - —
l.c.l., dms., works	lb.	.17 - —
tanks, works	lb.	.12½- —
Pentasulfide, solid, dms., c.l., works	lb.	.11½- —
l.c.l., dms., works	lb.	.13 - .13⅛
Pentoxide, dms., c.l., works	lb.	.13½- —
l.c.l., works	lb.	.16½- —
Sesquisulfide, tins, cs., works	lb.	.29 - —
export, dms.	lb.	.31 - .36
Trichloride, dms., c.l., works	lb.	.14 - —
l.c.l., works	lb.	.17 - —
tankcars, works	lb.	.12½- —
Phthalic anhydride, ogs, c.l., works, frt. equald	lb.	.20 - —
l.c.l., same basis	lb.	.21 - —
tanks, same basis	lb.	.19¼- —
Phthalimide, 97%-98%, dms., works, frt. alld	lb.	.65 - .70
a-Picoline, ret., dms., c.l., works, frt. equald	lb.	.43½- —
l.c.l., works, frt. equald	lb.	.44 - —
b,g-Picoline, 5°, dms., c.l., works.	lb.	.32½- —
l.c.l., works	lb.	.33 - —
g-Picoline, 98%, dms., c.l., works.	lb.	2.65 - —
Pilocarpine hydrochloride, NF, bots	oz.	5.25 - —
Nitrate, USP, bots., vials	oz.	4.80 - 4.90
Pimento, Jamaican, bgs	lb.	.88 - .90
Mexican, bgs.	lb.	.80 - —
Pink root, bls.	lb.	3.00 - 3.25
d-Piperazine hexahydrate, French Codex, bots	kilo.	8.00 - 8.50
Piperidine, 98%, dms., frt. equaid.	lb.	2.90 - 3.00
Piperonyl butoxide, dms., dlvd. E	lb.	4.50 - 5.30
Cyclonene, dms., dlvd. E	lb.	4.20 - 4.50
Pitch, coaltar, 140°-150°F, m.p. bulk, tanks, works	ton.	35.50 - —
Cottonseed, raw, dms., works	lb.	.02¼- .03
Linseed, dms	lb.	.06 Nom.
Marine, dms.	lb.	.04¼- .05
Petroleum (see Asphalt, petroleum).		
Soybean, dms., works	lb.	.05 Nom.
Tall, dms., works	lb.	.03¾- .04⅛
Plaster of Paris (see Gypsum).		
Platinum metal, works	oz.	82.00 - 84.00
Pleurisy root, bls	lb.	.45 - .50
Podophyllum resin, NF, dms	lb.	9.45 - —
Poke root, bls.	lb.	.19 - .22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Polymyxin, bulk, dms., bots., 50 billion units or more, 1,000,000 units .52 - —
25-50 billion units..1,000,000 units .54 - —
1-25 billion units..1,000,000 units .56 - —
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works lb. .41 - —
10,000-20,000-lb. lots, works, lb. .43 - —
smaller lots, works lb. .46 - .48
tristearate, dms., 20,000-lb. lots, works lb. .41 - —
10,000-20,000 lb. lots, works, /b. .43 - —
smaller lots, works lb. .46 - .48
Poppy seed, Argentine, bgs. .30 - .31
Dutch, bgs. lb. .33 - —
Polish, bgs. lb. .32 - —
Turkish, bgs. lb. .30 - .31
Potash, caustic, reg., flake, 88-92%, dms., c.l., works 100 lbs. 9.15 - —
l.c.l., works 100 lbs. 10.20 - —
liq., 45% basis, dms., c.l., works 100 lbs 4.25 - —
l.c.l., same basis 100 lbs. 5.05 - —
tanks, same basis 100 lbs. 3.70 - —
solid, 88-92%, dms., c.l., works 100 lbs. 8.70 - —
l.c.l., works 100 lbs. 9.75 - —
Potassium acetate, NF, dms lb. .31 - .36
Bicarbonate USP, gran. dms lb. .22 - —
powd. dms lb. .24 - —
Bichromate, bgs., c.l., works lb. .15 - —
l.c.l., works lb. .15½ - —
Potassium bichromate in dms. ¾c. higher.
Bitartrate, NF, dom., gran. or powd., bbls., 5,000 lbs. 1 shipt. lb. .33½ - —
dms., c.l. lb. .33 - —
smaller lots lb. .34 - .37
imp., kgs lb. .25¾ - .26
Bromate, bbls., 1,000 lbs. or more, lb. .50 - .52
25-200 lb lots lb. 53 - 57
Carbonate, tech., calcined, bbls., c.l., works 100 lbs. 9.00 - —
Bromide USP gran bbls. kgs. lb. .34 - —
l.c.l., same basis 100 lbs. 10.05 - —
hydrated, 83-85%, bbls., c.l., works 100 lbs. 7.60 - —
l.c.l., works 100 lbs. 8.65 - —
USP gran., bbls., dms lb. .16½ - .18
powd. bbls., dms lb. .21 - .23
Chlorate, cryst., dms., c.l., works. lb. .10¼ - —
l.c.l., works lb. .11½ - .12
powd., dms., c.l., works lb. .10¾ - —
l.c.l. works lb. .12 - 12¼
export, dms., New York lb. .12¾ - .13½
NF gran. dms lb. .34 - 35
Chloride, USP, cryst., dms. lb. .21 - .23
gran., dms lb. .15 - .17
powd. dms lb. .24 - .26
Chromate, tech., bgs. lb. .50 - .50½
Citrate, USP gran., dms. lb. .41 - —
powd., dms. lb. .40½ - .41½
Cyanide, dms., 500-lb. lots or more, works lb. .55 - —
smaller lots, works lb. .57 - —
Dichromate (see Potassium bichromate).
Ferricyanide, kgs. lb. .60 - .63
Ferrocyanide, dms., ton lots. lb. .22½ - —
smaller lots lb. .23 - —
kgs. lb. .28 - —
Fluoborate, fib. dms., c.l., works lb. .30 - —
l.c.l., works lb. .31 - —
Fluoride, dms., works lb. .37 - .38
Gluconate dms lb. .75 - .79
Glycerophosphate, 75% solution, cbys lb. 2.15 - 2.25
Guaiacolsulfonate, NF, dms. lb. 2.10 - 2.30
Hydroxide, tech. (see Potash caustic).
USP pellets 100-lb. dms. 1 to 100-dm. lots lb. .28½ - .3a
Hypophosphite, NF, fib. dms., ton lots or less lb. 1.00 - 1.03
Iodide, dms lb. 1.90 - 1.95
Manure salt 22% K_2O, bulk, mines unit-ton. .19 - —
Metabisulfite, gran., dms lb. .20 - .21
powd. dms lb. .25 - —
Muriate, dom., 50-60% K_2O, bulk, Carlsbad, N. M. unit-ton. .39½ - .40½
50-51% K_2O paper bgs., Carlsbad, N M ton 24.50 - —
Nitrate, cryst., bbls., 10,000-ton lots 100 lbs. 14.40 - —
smaller lots 100 lbs. 14.65 - 14.90
gran., bbls., 20-ton lots 100 lbs. 9.75 - —
smaller lots 100 lbs. 11.10 - 11.50
powd., bbls., 20-ton lots, 100 lbs. 10.75 - —
smaller lots 100 lbs. 12.00 - 12.50
NF, gran., dms lb. .09¾ - .11¾
Potassium nitrate in bags, 50c. per 100 lbs. less in kegs, $1 more.
Oxalate, neutral, tech., fine gran., bbls., dms lb. .30 - .32
Pentaborate, gran., bgs., c.l., works ton 189.00 - —
dms., ton lots, ex whse. ton 293.50 - —
smaller lots, ex whse. ton 296.00 - —
Powdered Potassium pentoborate, $10.25 per ton higher
Perchlorate, dms., c.l., works lb. .15 - —
l.c.l., works lb. .16½ - —
Permanganate, tech., dms., works lb. .22½ - .23½
USP dms works lb. .24¾ - .30¼
Persulfate, dms., 5-ton lots, works. lb. .18 - —
1-ton lots, works lb. .20 - —
Phosphate, tetrabasic, bbls., works lb. .16½ - .18½
Prussiate, red (see Potassium Ferricyanide), yellow (see Potassium Ferrocyanide).
Silicate, glass, bgs., c.l., works. 100 lbs. 17.00 - —
l.c.l. 100 lbs. 17.80 - —
soln., clarif., 29° Be, 1:2.5, dms., c.l., works 100 lbs. 5.80 - —
l.c.l., 5 dms., or more, works 100 lbs. 6.55 - —
tanks, works 100 lbs. 5.45 - —
tech., 29° Be, 1:2.5, dms., c.l., works 100 lbs. 5.35 - —
l.c.l., 5 dms., or more, works 100 lbs. 6.50 - —
tanks, works 100 lbs. 5.00 - —
40.5° Be., 1:2.0, dms., c.l., works 100 lbs. 6.45 - —
l.c.l., 5 dms. or more, works 100 lbs. 7.20 - 7.60
tanks, works 100 lbs. 6.10 - —
Silicofluoride, bbls., works lb. .09 - .10
Stannate, dms., frt. alld. E lb. .666 - .732
Sulfate, agricultural, 49-51% K_2O, bulk, works ton 35.00 - —
NF VII cryst. dms lb. .31 - .33
gran., dms. lb. .18½ - —
powder dms lb. .16½ - .17
Sulfocyanide, NF, cryst. (see Potassium thiocyanate).
Thiocyanate, NF, cryst., dms. lb. .84 - .94
tech., works lb. .77 - .79
Titanate, ctns., c.l., works lb. .14 - —
5-ton lots, works lb. .14½ - —
1-ton lot or less, works lb. .14¾ - —
Potassium-magnesium sulfate, bulk, works basis 40% K_2SO_4, 18% MgO ton 15.05 - —
Potassium-sodium tartrate, NF, gran., powd., dms., c.l. lb. .35 - —
5,000-lb. lots lb. .35½ - —
smaller lots lb. .36 - .41
Potassium-titanium fluoride, fib. dms., works lb. .39 - .40
Potassium-zirconium fluoride, fib. dms., c.l., works lb. .50 - —
l.c.l., works lb. .52½ - .55
Pregnenolone, bots. gram. .60 - —
Acetate, bots gram. .55 - —
Progesterone, USP, bots., 100 gram lots gram. .65 - —
Acetate, bots gram. .70 - —
Procaine hydrochloride, USP, 1,000-lb. lots, dms., frt. alld. lb. 2.90 - —
100-lb lots lb. 3.60 - —
Propane, indust., tanks, group 3, gal. .03½ - .04
N. Y. Harbor gal. .08 - .08½
n-Propyl acetate, dms., c.l., dlvd lb. .12¾ - —
l.c.l., dlvd lb. .13¾ - —
tanks, dlvd lb. .10¾ - —
Gallate, dms., 100 to 2,050-lb. lots works lb 3.90 - 4.40
p-Hydroxybenzoate, USP, dms lb. 2.30 - 2.40
Thiouracil, bots., 50-kilo lots or more kilo. 55.00 - —
smaller lots kilo. 55.10 - 55.30
Propylene dichloride, dms., c.l., dlvd. E lb. .0845 - —
l.c.l., same basis lb. .095 - —
tanks, same basis lb. .07 - —
Prices in West 1c. higher dlvd., on same basis.
Glycol, indust., dms., c.l., dlvd. E lb. .14¾ - —
l.c.l., same basis lb. .15¾ - —
tanks, same basis lb. .13 - —
USP, dms., c.l., dlvd. E lb. .16¾ - —
l.c.l., same basis lb. .17¾ - —
tanks, same basis lb. .15 - —
Methyl ether, dms., c.l., dlvd. E lb. .20 - —
l.c.l., same basis lb. .21 - —
tanks, same basis lb. .18½ - —
Propylene oxide, dms., c.l., dlvd. E. lb. .17 - —
tanks, dlvd. E lb. .15 - —
l.c.l., dlvd. E lb. .18 - —
Psyllium seed, black, bgs. lb. .20 - —
blonde, bgs. lb. .18 - .20
husks, bgs. lb. .45 - .50
Pumice, dom., grd., coarse to fine, 0, ½, 1, 1½, 2, 3, bgs., ton lots lb. .03¾ - .04¼
smaller lots lb. .03¾ - .04¼
imp., Italian, silk-screen, coarse, bgs., ton lots lb. .06½ - —
fine, bgs. ton lots lb. .04 - —
sun dried coarse bgs ton lots lb. 02½ - .04
fine bgs. ton lots lb. 02½ - 04
purif., 20%, dms., works lb. 10.00 - 10.10
Pumpkin seed, bgs lb. .25 - .26
Pyrethrin, syn., (see Allethrin).
Pyrethrum flowers, fine grd 0.9% pyrethrins bbls works. lb. .45 - —
powd., 1.3% pyrethrins, bbls., works lb. .65 - —
liq. (20 to 1) basis 2 grams pyrethrins per 100cc. odorless base, 50 dms., works. gal. 8.35 - —
1-4 dms., works gal. 8.55 - —
oleoresin, dewaxed, 20%, dms., works lb. 9.80 - 10.15
purif., 20% dms., works lb. 10.00 - 10.10
Pyridine, denaturing, dms., c.l., works and frt. equald gal. 2.77 - —
l.c.l., same basis gal. 2.80 - —
refd., 2°, non-ret. dms., l.c.l., same basis lb. .95 - —

Polymyxin—Quicksilver

Pyridoxine hydrochloride, bots., 100-gram lots gram. .55 - —
Pyrites, Canadian works long-ton 3.00 - 3.00
Pyrocatechol (see Catechol)
Pyrogallol, NF lb. 3.25 - 3.45
Pyroxylin, scrap, ungrd., amber, dms., works lb. .20 - —
black, dms., works lb. .12 - —
mixed, mottled, dms., works lb. .13 - —
shavings, amber, cs., works lb. No stocks.
mixed colors, dms., works lb. .11 - —
white, china, ivory, dms., works lb. .16 - —
dense, opaque, dms., works. lb. .12 - .13
translucent pastels, cs., works. lb. .14 - —
transparent colorless, dms., works lb. .25 - —
colors, dms., works lb. .15 - —
USP, bots lb 9.50 - —

Q

Quassia chips lb. 17 - —
Quebracho extract, clarif., grd., 70% tannin, bgs. c.l., lb. .16¼ - .16¾
liq., 35% tannin, bbls., works. lb. .08¼ - —
solid., clarif., 64% tannin, bgs., c.l., exdock, duty extra. lb. .12 23/64 - —
ord., 63% tannin, bgs., c.l., same basis lb. .11 21/32 - —
Quercitron extract, cryst., No. 1, bbls., l.c.l. lb. .40 - —
liq., No. 1, bbls., l.c.l lb. .19 - —
Quicksilver (see Mercury metal).

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Quince Seed—Soda, Caustic

Quince seed, bgs lb. 2.00 Nom.
Quinidine, NF, V cryst., cns., 100-oz. lots oz. 1.15 • —
powd., precip., cns., 100-oz. lots. oz. 1.17 • —
Sulfate, USP, cns., 100-oz. lots. oz. .87 • —
Quinine, NF, cns., 100-oz. lots oz. .54 • —
Bisulfate, USP, cns., 100-oz. lots oz. .37½- —
Dihydrochloride USP cns oz. .54 • —
Ethylcarbonate, NF, cns., 100-oz. lots oz. .63½- —
Hydrobromide NF cns. 50-oz cns. oz. .47½- —
Hydrochloride, USP, cns., 100-oz. lots oz. .47½- —
Phosphate NF, cns. 100-oz lots.oz. .61 - —
Salicylate NF, cns., 100-oz. lots.oz. .55 • —
Sulfate, USP, cns., 100-oz. lots.oz. .42 • —
Quinine and Urea hydrochloride NF, cns oz. .56 • —
Quinoline, dms., c.l., frt. equald lb. .50¾- —
l.c.l., same basis lb. .51¼- —
tanks, same basis lb. .50 • —

R

R salt, paste, dms., frt. alld., 100% basis lb. .83 • —
powd., frt. alld, 100% basis lb. .88 • .93
Rauwolfia serpentina root, powd., bbls., dms lb. 1.75 • —
Red, BON acid maroons, pure, bbls lb 1.75 • —
resinated, bbls lb 1.50 • —
arylid, deep shades, bbls lb 3.60 • —
light shades, bbls lb 2.75 • —
maroon, bbls lb 3.60 5.90
Red, Cadmium, CP, dark shade, bbls., frt. alld. E. of Rockies lb. 4.30 • —
light shade, same basis lb. 4.00 • —
medium shade, bbls., same basis lb 4.25 • —
medium-light shade, bbls., same basis lb 4.05 • —
orange shade, bbls., same basis lb. 3.95 • —
Lithopone, deep shade, bbls., same basis lb. 1.93 • —
light shade, bbls. same basis. lb. 1.70 • —
maroon shade, bbls., same basis lb. 2.05 • —
medium shade, bbls. same basis lb. 1.85 • —
medium-light shade, bbls., same basis lb 1.77 • —
orange-red shade, bbls., same basis lb. 1.64 • —

Red cadmium lithopone all shades, in smaller pkgs., 5c. per lb higher; all prices are 1c per lb higher ex whse. Los Angeles and San Francisco.

Carmine No. 40 (see Carmine).
Dyes (see Dyes, coaltar).
Eosin toner, bbls., works lb. 1.60 • —
Indian, dom., pure, bgs., Bethlehem, Easton, E. St. Louis, N Y lb. .12¾- —
Iron oxide, nat., 75%-85% ferric oxide, bgs., l.c.l., Bethlehem, Pa., Copley, O., Easton, Pa., East St. Louis lb. .06 • —
syn. 98% ferric oxide, bgs., c.l., works lb. .12¾- —
l.c.l., works lb. .13 • —
Red, Lake C toner, alizarin, bbls., works lb. 1.10 • 1.20
Lithol toner, bbls., works lb. .79 • —
rubine toner, pure, bbls., works. lb. 1.50 • —
resinated, bbls., works lb. 1.40 • —
Virginia type, bbls., works lb. 1.40 • —
Maroon toner, MNPT, kgs., works lb. 3.60 • —
10,000-lb. lots, works lb. 4.22 • —
smaller lots, works lb. 4.24 • —
Metallic, bbls., c.l., works lb. .02½- —
l.c.l., works lb. .02¾- —
Naphthol ITR, bbls., works lb. 5.25 • —
Oxide (see Red iron oxide).
Persian Gulf, bgs., c.l., works. lb. .06¾- —
l.c.l., works lb. .07 • —
Para toner, bbls lb. .95 • —
Chlorinated, kgs. lb. 1.10 • 1.15
Phloxin toner (see Red eosin toner).
Rhodamine, molybdated, PMA, kegs lb. 5.35 • —
tungstated, PTMA, works, kegs. lb. 5.95 • —
Spanish oxide, bbls., c.l., ex dock lb. .05¾- —
l.c.l., ex dock lb. .06 • —
ex whse., New York lb. .06½- —
Toluidine toner, deep shades, kgs., works lb. 1.50 • —
light shades, kgs., works lb. 1.50 • —
Turkey, bbls., works lb. .60 • —
Tuscan, bbls., frt. equaid lb. .24½- .25
Venetian, 15%, bgs., works lb. .0350- .037
20%, bgs., works lb. .0475- —
25%, bgs., works lb. .0525- —
30%, bgs., works lb. .0550- —
35%, bgs., works lb. .0575- —
40%, bgs., works lb .0625- —
Watchung-type, bbls lb. 1.95 • —
Red KB base (see 4-Chloro-2-aminotoluene).
Red, precipitate (see Mercuric oxide, red).
Red saunders, NF, powd., bbls lb. .35 • .40
Reserpine, cryst., bots., 100 gram lots gram.25.00 • —
25 gram lots gram.26.00 • —
10 gram lots gram.27.50 • —
Resorcinol, tech. grade, dms., c.l., works lb. .77½- —
l.c.l., works lb. .78½- —
USP, cryst., dms., works lb. 2.75 • —
powd. dms. works lb 2.95 —
Monoacetate, NF, dms lb. 3.00 • 3.25
Rhatany root, bgs lb. .15 .16
Rhodinol, 5-lb. cans lb.25.50 -34.00
Rhubarb root, China, whole, cs lb. .75 • .85
powd., bbls lb. .90 • .95
India, whole bgs lb. .35 • .40
powd., bbls lb. .43 • .45
Riboflavin USP bots., dlvd kilo.100.00 • —
readily soluble, bots., dlvd kilo.130.00 • —
5'-phosphate-sodium, 100-gram lots or more kilo.140.00 • —
Rochelle salt (see Potassium-sodium tartrate).
Rosin gum and wood (see Naval Stores Protective Coatings market).
Rotenone, CP, bbls., works lb.20.00 • —
tech bbls works lb 16 50 • —
Rottenstone, bgs., 5-ton lots, ex-whse lb. .03 • —
ton lots, same basis lb. .04 • —
Rutin, NF, fin dms 25-kilo lots. kilo.17.50 -18 50
10 to 25-kilo lots kilo.17.50 -20.00
1 to 10-kilo lots kilo.18.90 -20.00
Ryania, 100% powd., bgs., c.l., works. lb. .22 • —
l.c.l., same basis lb. .24 • —

S

Sabadilla seed, powd., bbls lb 49 4[illegible]¼
activated ground with lime bbls lb. .30 • .32
Saccharin, USP, gran., soluble, dms., 1000-lb lots lb 1.60 —
smaller lots lb 1 70 1.80
powd., soluble insoluble, dms., 1000-lb. lots lb 1.65 —
smaller lots lb 1 75 1 95
Saffron Spanish, USP, tins lb.28.00 -30.00
Safrol, dms lb. 1.25 • 1.50
Sage, Cretan, bgs lb. .11 • —
Dalmatian, bgs. lb. .40 • —
Italian, bgs. lb. .14 • —
Sago flour, raw, bgs lb. .06½- .06¾
refd., bgs lb. .08¼- .08¾
Sal soda (see Soda sal).
Salol, NF, gran., bbls.; kgs lb. 1.10 • —
Powdered salol, 25c. higher
Salt, rock, paper bgs., c.l. 100 lbs. .98 • —
table, vacuum, common, fine, paper bgs., c.l 100 lbs. 1.12 • —
Saltcake, dom., bulk, works, 100% Na_2SO_4 basis ton.24.00 -26.00
Saltpeter (see Potassium nitrate.
Sandalwood, East Indies, chips bgs. .65 • .66
powd., fib. dms lb. .75 • .76
Sanguinarine nitrate, bots oz 4.75 5.50
Santonin, NF, dom. cryst., powd. cns., dms lb.76.50 -80.00
imported, cryst., powd. cns lb.76.50 -80 00
Sarsaparilla root, dom., bls lb. .45 • .50
imp., Honduras, bls lb. .45 Nom.
Mexican, bls lb. .35 Nom.
Sassafras root bark, ord., bls lb. .45 • —
select, bls lb. .65 • —
Schaeffer's salt, paste, dms., frt. alld., 100% basis lb. .95 • —
powd., bgs., frt. alld lb. .95 • —
Scopolamine hydrobromide, USP, bots oz.12.25 -12.50
Seidlitz mixture, bbls., 5,000-lb. lots lb. .30½- —
smaller lots lb. .31 .32
Selenium, powd., dms., dlvd. lb. 5.00 • 6.00
Senega root, bls lb. 3.50 • —
Senna leaves, Alex., whole and half, bls lb. .19 • —
siftings lb. .17 • —
Tinnevelly, No. 1, bls lb. .16 • .18
No. 2, bls. lb. .13 • .15
No. 3, bls. lb. .11 • .13
powdered, bbls., bxs lb. .18 • —
pods, bls. lb. .14 • —
Serpentaria root, bls lb. 4.25 • —
Sesame seed, Nicaragua, hulled, ship't, bgs lb. .25 • .26
nat., bgs lb. .17½- —
Salvadorian, natural lb. Nominal
Shellac, bleached, bonedry, bgs., 1,500-lb. lots lb. .58 • —
bbls., 1,500-lb. lots lb. .59 • —
kgs., 1,500-lb. lots lb. .61 • —
refd., bgs., 1,500-lb. lots lb. .66 • .67
bbls., 1,500-lb. lots lb. .67 • —
kgs., 1,500-lb. lots lb. .69 • —

Bonedry shellac prices for less than 1,500-lb. lots, 1c per lb higher for all packages.

Lemon, No. 1, bgs., 10-bg. lots lb. .52 Nom.
No. 2, bgs., 10-bag lots lb. .51 Nom.
Superfine, bgs., 10-bag lots lb. .50 • .51N
TN, bgs., 10-bag lots lb. .49 • .50N.

Shellac in 1 to 9 bg. lots, 1c. more.

Shingle stain oil (see Oil, shingle stain).
Silica, amorph., dry-grd., 325 mesh bgs., c.l., works ton.25.00 • —
l.c.l., works ton.30 00 -40.00
hard-quartz, 99½%, 325 mesh, bgs., c.l., works ton.20.00 • —
l.c.l., works ton.25.00 -30.00
140 mesh, bgs., c.l., works ton.15.00 • —
l.c.l., works ton.20.00 • —
Silicon tetrachloride, tech., dms., c.l., works lb. .16 • —
l.c.l., works lb. .20 • .28¼
Silver bullion, ingots, cs lb. .85¼- —
Cyanide, fib. dms., 2,500-oz. lots. oz. .77⅜- —
1,000-oz. lots oz. .77⅝- —
500-oz. lots oz. .77⅞- —
100-oz. lots oz. .78¼- —
Nitrate, CP, crystals, bots., 2,500-oz. lots oz. .54¾- —
1,000-oz. lots oz. .56 • —
500-oz. lots oz. .56½- —
250-oz. lots oz. .57 • —

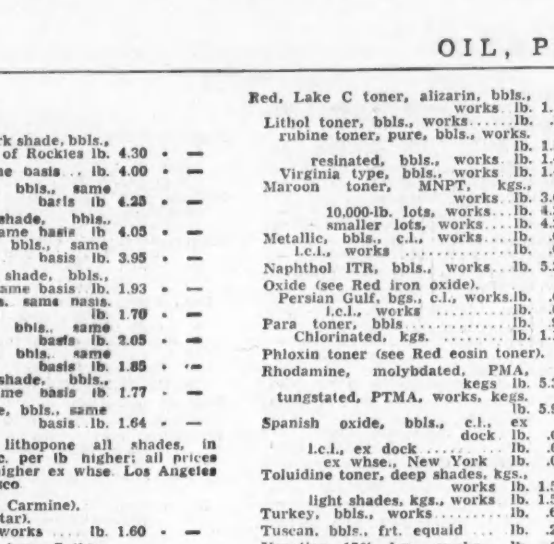
USP granular silver nitrate 4c. per oz. higher.

Silver proteinate, mild, USP, bots., dms., 1,000-oz. lots oz. 1.05 • —
strong, NF, bots., dms., 1,000-oz. lots oz. 1.00 • —
Soapbark, whole, bls lb. No prices
crushed, bls., bbls lb. No Prices
powd., bbls lb. No Prices
Soda ash, dense, 58% paper bgs., c.l., works 100 lbs. 1.70 • —
l.c.l., stock points 100 lbs. 2.80 • 4.57
bbls., c.l., works 100 lbs. 2.30 • —
l.c.l., stock points 100 lbs. 3.35 • 4.12
bulk, c.l., works 100 lbs. 1.40 • —
light, 58%, paper bgs., c.l., works 100 lbs. 1.65 • —
l.c.l., stock points 100 lbs. 3.75 • 4.52
bbls., c.l., works 100 lbs. 2.20 • —
l.c.l., stock points 100 lbs. 3.25 • 5.52
bulk, c.l., works 100 lbs. 1.35 • —
Soda, caustic, flake, powd., 76%, dms., c.l., works, frt. equald. 100 lbs. 4.25 • —
l.c.l., stock points 100 lbs. 5.45 • —

NOW... with new FR-28

Latex-base paints can have *desired covering power, good color, washability, and* FLAME RESISTANCE!

FR-28 puts SAFETY FROM FIRE into paints having good scrub-resistance! This new sodium borate product—FR-28—has been specifically developed for use as an additive for your latex-base paint composition to produce a coating that is actually flame resistant. Such paints are easily mixed with simple equipment for application with all conventional sprays . . . and they do resist fire! Look at this test panel for proof!



Wall board coated with paint containing FR-28 showed this superior flame resistance . . . readily met Fed. Spec. SS-A-118a and SS-A-118b when tested by a nationally known laboratory.

FR-28

FR-28 is a readily soluble sodium borate powder containing approximately 66% B_2O_3 (boron trioxide) which is compatible with numerous latices now being offered by various manufacturers. FR-28 is rated as Class C (slow burning) according to the interpretation of Fed. Spec. SS-A-118a and revised SS-A-1118b. FR-28 is part of a basic paint formula developed and thoroughly tested in our research laboratory. Write today for Service Bulletin 6-F to get the formula and Bulletin FR-28 for technical information; address . . . 100 Park Ave., New York 17, New York.

PACIFIC COAST BORAX CO.
DIVISION OF BORAX CONSOLIDATED, LIMITED

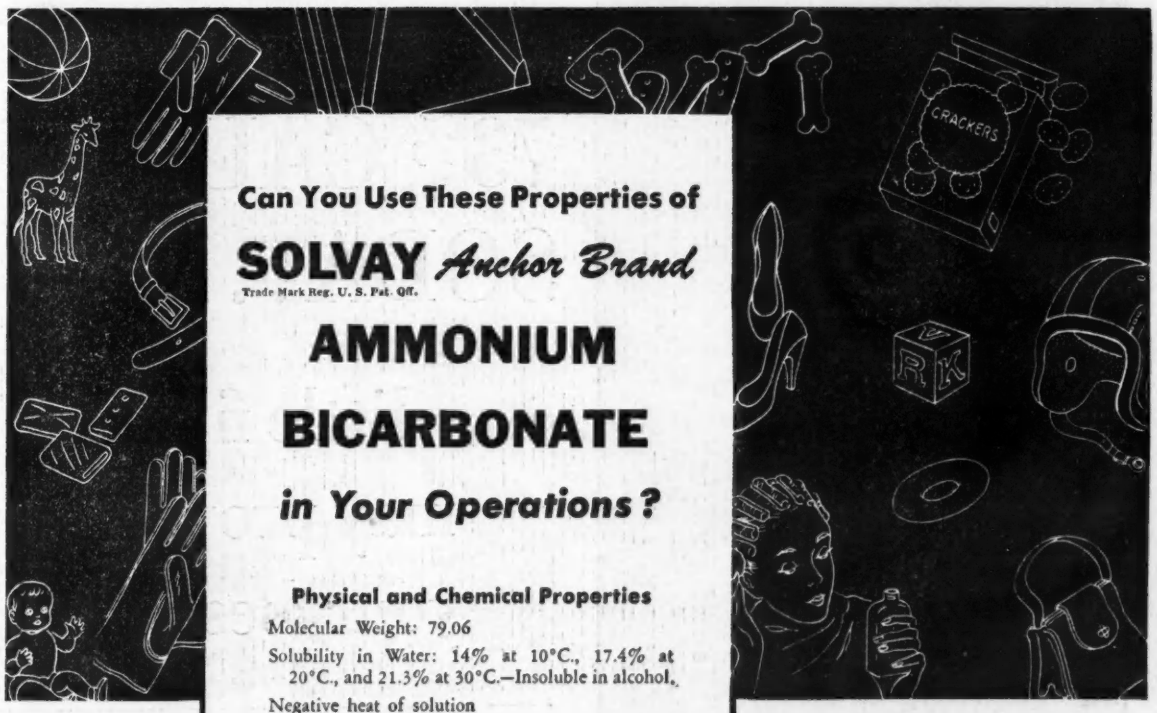
630 SHATTO PLACE, LOS ANGELES 5, CALIF. • 100 PARK AVE., NEW YORK 17, N. Y.

Soda, caustic, liq., 50%, sellers' tanks, works, dry basis, 100 lbs. 2.70 - —
rayon-type, sellers' tanks, works, dry basis..100 lbs. 2.80 - —
70%, sellers' tanks, works, dry basis..100 lbs. 2.80 - —
rayon-type, sellers' tanks, works, dry basis..100 lbs. 2.90 - —
solid, 76%, dms., c.l., works. 100 lbs. 3.35 - —
l.c.l., stock points..100 lbs. 5.05 - —
Sal., bgs., c.l., works.....100 lbs. 1.40 - —
l.c.l. works 100 lbs. 1.70 - —
Sodium acetate, anhyd., bgs., c.l., works lb. .12 - —
dms., l.c.l., works lb. .12¾- —
NF, 60%, gran., dms., c.l., works lb. .11 - —
dms., l.c.l., works..... lb. .1250- —
Alginate, NF, white powd., dms., ton lots, works.....lb. .87 - 1.30
refd., bbls., works.....lb. .83 - —
p-Aminobenzoate, dms., 1,000 lb. lots or more lb. 2.40 - —
smaller lots lb. 2.45 - 2.50
p-Aminosalicylate, dms., 1,000-lb. lots or more, frt. adjusted lb. 3.75 - —
smaller lots, same basis lb. 3.80 - 4.25
Antimoniate, bbls., c.l., dlvd. E lb. .29 - —
l.c.l., dlvd E.....lb. .30½- —
Arsenate, dms., c.l., works...lb. .12½- —
l.c.l., works.....lb. .13¾- .14¾
Arsenite, dms., c.l., works...lb. .13½- —
l.c.l., works.....lb. .14¼- .15½
soln., dms., works.....gal. .70 - 1.10
Ascorbate, dms., 25-50 kilo lots..kilo.16.00 - —
10-kilo lots.....kilo.16.35 - —
5-kilo lots.....kilo.16.75 - —
1-kilo lots.....kilo.17.00 - —
bots., 500-gram lots.....kilo.17.50 - —
Benzoate, tech., bbls., dms., 100-lb lots or more lb. .39 - —
USP, t bls. dms. 100-lb. lots, or more lb. .48 - —
Bicarbonate, USP, gran., bgs., c.l., works 100 lbs. 2.70 - —
l.c.l., works 100 lbs. 3.70 - —
powd., bgs., c.l., works 100 lbs. 2.30 - —
l.c.l. works 100 lbs. 3.30 - —
Bichromate, bgs., c.l., works. lb. .11½- —
l.c.l., works..... lb. .12 - .13¼
Bifluoride, bbls., c.l., works, frt. equald lb. .17½- —
l.c.l., same basis lb. .1790- —
Bisulfate, bulk., c.l., works. 100 lbs. 2.00 - —
dms., c.l., works.....200 lbs. 2.65 - 3.85
l.c.l., works .....100 lbs. 3.05 - 3.65
Bisulfite anhyd., bgs., c.l., works. 100 lbs. 4.50 - —
l.c.l., works .....100 lbs. 4.90 - —
soln., 35°, bbls., c.l., works. 100 lbs 1.40 - —
l.c.l., works.....100 lbs 1.80 - —
Borate (see Borax).
Bromide, USP, bbls., kgs., works. lb. .34 - .35
Cacodylate, NF, dms., jars....lb. 6.25 - 6.50
Carbonate, anhyd. (see Soda ash). crystalline decahydrated (see Soda sal). monohydrated bgs., c.l., works 100 lbs. 2.90 - —
l.c.l., works .....100lbs. 3.30 - —
Carboxymethyl cellulose (see CMC).
Chlorate, cryst., dms., c.l., works. lb. .08¾- —
l.c.l., works..... lb. .10¼- .11
Chloride, tech. (see Salt). USP, dms. lb. .05 - .12
Chlorite, tech., dms., c.l., works. lb. .58 - —
20-ton lots or more, works. lb. .66 - —
smaller lots, works..... lb. .70 - .73
Chloroacetate, tech., dms., c.l., works. lb. .27 - —
l.c.l., works..... lb. .28 - —
Chromate, dms., c.l., works....lb. .13¼- —
l.c.l., same basis ..... lb. .13¾- .15
Citrate, anhyd., dms.....lb. .60 - .65
NF VIII, gran., dms.....lb. .26 - .30½
USP, XVI gran., dms.....lb. .29½- .34
Sodium citrate USP powd prices ½c. higher.
Cyanate, dms., 1,000-lb lots, works. lb. .85 - 1.10
smaller lots works lb 1.00 - 1.25
Cyanide flake, 96-98%, dms., c.l. or 20,000-lb. lots lb. .178 - —
over 1,000-lb. lots.... lb. .188 - —
100-lb. to 1,000-lb. lots lb. 198 - —
Granular sodium cyanide ic. higher.
Diacetate, 33-35% acidity, 250-lb. dms., works lb. .14 - —
l.c.l., works.....lb. .14¾- —
anhyd., dms., c.l., works....lb. .17 - —
l.c.l., works.....lb. .17¾- —
Dichromate (see Sodium bichromate).
Ferrocyanide, bgs., 10-ton lots. lb. .13½- —
smaller lots lb. .14 - —
Fluoride, white, 97%, bbls., c.l., works lb. .1250- —
l.c.l. works lb 1290- —
Formate, bgs., c.l., dlvd. E 100 lbs. 7.60 - —
l.c.l., works 100 lbs 8.65 - —
Gentisate 100 lb. fib dms lb 8.50 - —
Gluconate, refd., dms. ..... lb. .80 - .83
tech., dms ..... lb. .35 - —
Glutamate, mono-, dms., c.l ..lb. 1.53 - —
Glycerophosphate, NF, cryst., bbls. lb. 2.10 - 2.25
powd., bbls.....lb. 2.15 - 2.30
soln., 75%, cybs .....lb. 1.45 - 1.60
Hydride, dms., works.....lb. 1.80 - 3.00
Hydrosulfide (see Sodium sulfhydrate).
Hydrosulfite, dms., c.l., frt. alld.lb. .23 - —
l.c.l., frt. alld. ..... lb. .23½- —
Hydroxide, tech. see Soda caustic)
NF pellets, 100-lb dms., 1 to 100-dm. lots lb. .18½ - .23
Hypophosphite, NF, dms., ton-lots or less lb. .93 - .98
Hyposulfite, NF (see Sodium thiasulfate).
pea crystals, bgs..... 100 lbs. 4.50 - —
gran., bgs., c.l., works 100 lbs. 4.75 - 5.00
photo grade, bgs., c.l., works. 100 lbs. 4.50 - 4.75
l.c.l., works.....100 lbs. 5.00 - 5.05
tech., bgs., works.....100 lbs. 4.50 - —
l.c.l., works .....100 lbs. 4.90 - 6.90
Sodium hyposulfite crystals in bbls., 50c. higher.
Iodide, USP, bots., dms .....lb. 2.55 - —
Lactate, edible, 50%, dms., cbys., works lb. .21½- —
60% dms cbys. works lb. .26½- —
tech., 50% dms., cbys. works, lb. 16¼ —
Lauryl sulfate, dms., c.l., dlvd. lb. .22 - —
l.c.l., dvid.....lb. .23 - —
tanks, dlvd.....lb. .20 - —
Metabisulfite (see Sodium bisulfite).
Metaborate, octahydrate, gran., bgs., c.l., works ton.78.50 - —
l.c.l., ex whse .... ton.124.50 - 129.50
Sodium metaborate, octanydrate in bbls., $24.50 per ton higher
Tetrahydrate, c.l., bbls., works. ton.199.50 - —
Metallic, bricks, bbls., works lb. .17 - .19
tanks, works lb. .16 - —
Metanilate, bbls., frt. alld.....lb. .62 - —

Sodium metasilicate, anhyd., bgs., c.l., works..100 lbs. 5.10 - —
l.c.l., works.....100 lbs. 5.20 - 7.10
dms., c.l.....100 lbs. 5.25 - —
l.c.l. .....100 lbs. 5.60 - 6.00
Pentahydrate, bgs., c.l., works. 100 lbs. 4.10 - —
l.c.l., works .....100 lbs. 4.45 - —
dms., c.l., works.....100 lbs. 4.50 - —
l.c.l., works.....100 lbs. 5.10 - —
Molybdate, bbls., cbys., works. lb. .75 - .85
anhyd., powd., dms., works lb. .85 - .92
Monohydrate (see Sodium carbonate, monohydrated).
Naphthionate, bbls..... lb. .70 - —
Nitrate, crude, dom., bgs., c.l., works..ton.47.00 - —
bulk, c.l., works.....ton.43.50 - —
imp., 100-lb. bgs., c.l., Atl. Gulf, Pac., whse....ton.51.25 - —
bulk, c.l., same basis..ton.47.75 - —
Nitrite, USP, bbls., c.l., works, frt. equald..lb. .08 - —
l.c.l., same basis.....lb. .09½- —
Orthosilicate, conc., dms., c.l., works. 100 lbs. 6.00 - —
l.c.l., works .....100 lbs. 6.35 - 6.75
hydrated flake, bbls., c.l., works 100 lbs. 5.25 - —
l.c.l., dlvd. .....100 lbs. 7.00 - —
Oxalate, 88%, bgs., works..100 lbs.10.85 - —
Para-aminobenzoate (see sodium p-Aminobenzoate).
Para-aminosalicylate (see Sodium p-Aminosalicylate).
Pentachlorophenate, briquets, bgs., c.l., works, frt. equald .lb. .25½- —
l.c.l., same basis lb 26½ .28¼
pellets, bgs., c.l., same basis lb. .25 - —
l.c.l., same basis.....lb. .26 - .28

Sodium pentachlorophenate, powd., bgs., c.l., same basis....lb. .24 - —
l.c.l. same basis ..... lb. .25 - .27
Pentachlorophenate, 20,000 lbs. min. truckloads, ¼c. per lb. over carlot prices.
Perborate, USP, tech., bbls., c.l., works..lb. .193 - —
l.c.l., works lb. .198 - —
Peroxide, dms., c.l., dlvd. E. of Miss lb. .1860- —
l.c.l., same basis lb. .1910- .2010
Phenolsulfonate, USP IX, gran., dms lb. .44 - .45
powd., dms ..... lb. .47 - .48
Phosphate, dibasic, anhyd., bgs., c.l., frt. equald..100 lbs. 7.45 - —
l.c.l., works 100 lbs. 7.85 - —
USP, dried powd., bgs., dms., works lb. .19 - .20½
duohydrate, bgs., c.l., frt. equald 100 lbs. 7.05 - —
l.c.l., frt. equald.100 lbs. 7.25 - —
monobasic, anhyd., bgs., c.l., frt. equald 100 lbs. 8.45 - —
l.c.l., frt. equald 100 lbs 8.90 - —
tribasic, cryst., bgs., c.l., frt. equald 100 lbs. 4.20 - —
l.c.l., frt. equald 100 lbs. 4.60 - —
Sodium phosphates in dms. 60c. higher than bgs.
Prussiate, yellow (see Sodium ferrocyanide).
Pyrophosphate acid, bgs., c.l., works, frt. equald ..100 lbs.10.75 - —
ferric, dms., 1,500-lb. lots, works. lb. .31 - —
smaller lots, works.....lb. .32 - —

Sodium pyrophosphate, tetrabasic, anhyd., bgs., c.l., works, frt. equald..100 lbs. 7.90 - —
l.c.l., frt equald 100 lbs. 8.10 - —
Salicylate, USP, dms ..... lb. .63 - —
Sesquicarbonate, bgs., c.l., works. 100 lbs. 2.10 - —
l.c.l., dlvd., zone 1....100 lbs. 3.65 - 4.10
zone 2 .....100 lbs. 4.10 - 4.35
zone 3 .....100 lbs 4.40 - 4.65
zone 4 .....100 lbs 5.10 - 5.35
Sales zones are: (1) All States E. of Miss. R. and N. of south bound of Ky. and Va.; Ala., La., and Miss., south of 31° Tex. E. of 100°; S. of 31° Fla.; also Me., N. H., and Vt., in which there are special county zones: Davenport, Ia. and St. Louis; (2) Ark. E. of 93° Ga.; Iowa (except Davenport), Minn.; Mo. (except St. Louis), Neb., E. of 98° N. C., S. C., Tenn. and Tex. N. of 31° and E. of 100° (except Wichita Falls); also Ala., La. and Miss. No. of 31°; (3) Ark. W. of 96°, Kan., Neb. W. of 98°; N. D., Okla., S. D., Tex., W. of 100° (including Wichita Falls, excluding El Paso); (4) Ariz., Colo., Idaho, Mont., Nev., N. M., Utah, Wyo., and El Paso, Tex.
Sesquisilicate, hydrated, bgs., c.l., works..100 lbs. 4.60 - —
l.c.l., works.....100 lbs. 4.95 - —
dms., c.l., works.....100 lbs. 5.00 - —
l.c.l., works.....100 lbs. 5.35 - —
Silicate, liq., 40° 1:2:3, turbid, dms., c.l., works...100 lbs. 1.35 - —
l.c.l., works...100 lbs. 1.70 - 2.30
tanks, works ..100 lbs. 1.00 - —
47°, turbid, 1:2.9, dms., c.l., works 100 lbs. 1.95 - —
l.c.l., dms., works. 100 lbs. 2.55 - 2.80
tanks, works ... 100 lbs. 1.60 - —



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SOLVAY *Anchor Brand*

Trade Mark Reg. U. S. Pat. Off.

AMMONIUM BICARBONATE

in Your Operations?

Physical and Chemical Properties

Molecular Weight: 79.06

Solubility in Water: 14% at 10°C., 17.4% at 20°C., and 21.3% at 30°C.—Insoluble in alcohol.

Negative heat of solution

Stability: Relatively stable at room temperatures. Rapidly and completely volatile at 140°F. and above. Rate of decomposition increases as temperature rises. The gases formed in this process are as follows:

Ammonia gas (NH_3) 21.5%
Carbon dioxide gas (CO_2) . . 55.7%
Water vapor (H_2O) 22.8%

pH of 1/10 N solution at 25°C.: 7.8

Appearance: White Crystals

Quality: Exceptionally pure. Food grade. Can be used as a reagent. Very low metal content.

Some Typical Uses of Anchor Brand AMMONIUM BICARBONATE

Fluffing and Adding Bulk to Cookies, Biscuits, Baked Pet Foods

Manufacturing Sponge Rubber

Creating special forms of Plastics and other Materials

Cold Wave Solutions

Chrome Leather Tanning

From biscuits to plastics . . . from chrome leather processing to cold wave solutions—these are the varied fields in which Solvay "Anchor Brand" Ammonium Bicarbonate has already found important use. The properties and unusual features of this versatile product suggest many other uses; it may find application in *your* operations.

Solvay "Anchor Brand" Ammonium Bicarbonate is a safe, low cost source of ammonia and carbon dioxide. It can be used to create voids, decrease density and add bulk in plastic materials. It is an exceptionally efficient neutralizing agent, although it has an unusually low pH. It has higher neutralizing value than either borax or sodium bicarbonate—and yet a 1/10 normal solution at 25°C. has a pH of only 7.8. And—because "Anchor Brand" Ammonium Bicarbonate volatilizes completely at relatively low temperatures—it leaves no residue to affect the end product.

For samples and more detailed technical information, fill in and mail coupon.

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Soda Ash • Caustic Soda • Chlorine • Potassium Carbonate • Calcium Chloride • Caustic Potash • Sodium Bicarbonate • Ammonium Bicarbonate • Specialty Cleansers • Sodium Nitrite • Para-dichlorobenzene Ortho-dichlorobenzene • Monochlorobenzene Ammonium Chloride • Sesquicarbonate of Soda

SOLVAY PROCESS DIVISION

Allied Chemical

Allied Chemical & Dye Corporation
61 Broadway, New York 6, N. Y.

I am interested in the possible use of Solvay "Anchor Brand" Ammonium Bicarbonate in my operations. Please send me, without cost or obligation, samples and further technical information.

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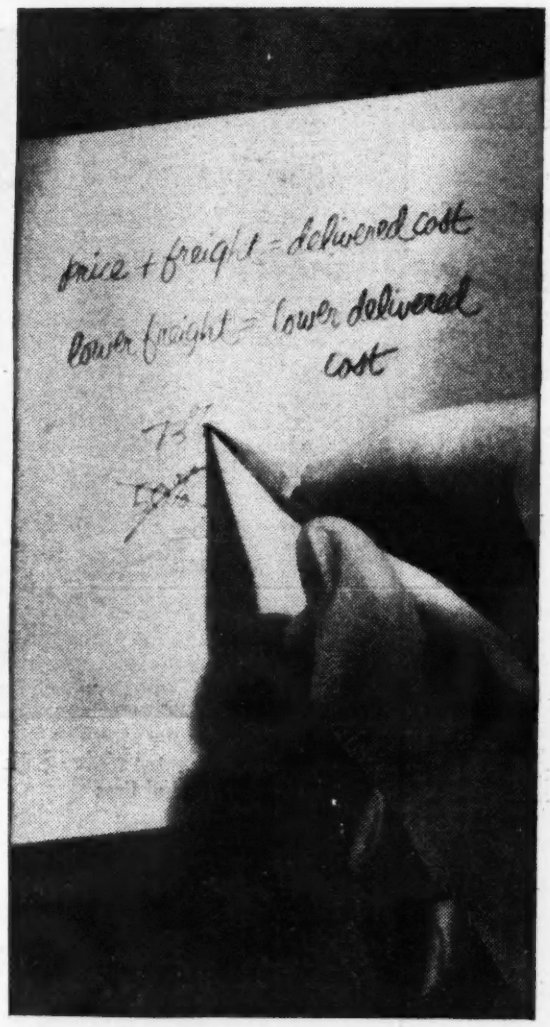
COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____ BC-11

Sodium Silicate 52°—Sulfur Monochloride

Sodium silicate, 52°, turbid, 1-2-3, dms., c.l., works 100 lbs. 2.30 - —
i.c.l., works 100 lbs. 2.65 - 3.05
tanks, works 100 lbs. 1.95 - —
solid, 1-3.2, ngs works ton 57.50 - —
Silicofluoride, bgs., c.l., works lb. .07 - —
t.c.l. works lb. .07 - .08
Sodium silicofluoride in dms., 4/10c. higher
Stannate dms., works, frt alld. E lb. .530 - .584
Sulfa drugs (see Sulfa name).
Sulfanilate, bbls., works lb. .22 - —
Sulfate, NF, VII, dried, powd., dms lb. .22½- —
tech., anhyd., bgs., c.l., dlvd., E 100 lbs. 2.50 - —
rayon grade, bgs., c.l., works. ton 29.00 - —
t.c.l., works ton 35.00 - —
USP cryst. fib dms lb. .17¼- .18
gran. fib. dms lb. .17½- .18
Sulfide, flake, dms., c.l., works, E., frt. equald lb. .05¼- —
t.c.l., same basis lb. .05¾- —
fused, bbls., c.l., works, E., frt. equald lb. .04¾- —
t.c.l., same basis lb. .05¼- —
Sulfite, anhyd., bgs., c.l., works. 100 lbs. 3.00 - —
t.c.l. same basis 100 lbs. 3.50 - —
powd., bbls., c.l., works 100 lbs. 7.25 - —
t.c.l., works 100 lbs. 7.50 - —
Sulfhydrate, flake, 70-72%, dms., c.l., works lb. .06½- —
t.c.l., works lb. .07 - —
liq., 40-44%, tanks, works, 100% basis ton. 110.00 - —
Sulfocyanide, CP, (see Sodium thiocyanate).
Sodium tetrasulfide, liq., 40%, dms., c.l., works lb. .03½- —
t.c.l., works lb. .04 - —
Tetraborate (see Borax).
Thiocyanate, CP, dms lb. .55 - .65
Thiosulfate, NF, cryst., bbls lb. .12½- —
tech., dms. works lb. .377 - —
tech. (see Sodium hyposulphite).
Titanate, ctns., c.l., works lb. .10½- —
5-ton lots, works lb. .10¾- —
1 ton or less, works lb. .11 - —
Trichloroacetate, 99% 100-lb. dms., c.l., frt. alld., E lb. .37½- —
t.c.l., frt. adjusted, E lb. .39½- —
50-lb dms., c.l., frt. alld. E. lb. .38 - —
t.c.l., frt. adjusted, E lb. .40 - —
10-lb. cns., c.l., frt. alld. E. lb. .44 - —
t.c.l., frt. adjusted, E lb. .46 - —
Prices on Sodium trichloroacetate W. of the Rockies are 1¾c. per pound higher.
Tripolyphosphate, bgs., c.l., works, frt. equald 100 lbs. 8.05 - 8.25
t.c.l., same basis 100 lbs. 8.30 - 8.45
Trisilicate, powd., 1:32.2, bgs., c.l., works 100 lbs. 8.65 - —
t.c.l., works 100 lbs. 9.40 - 12.80
dms., c.l., works 100 lbs. 9.05 - —
t.c.l., works 100 lbs. 9.80 - 10.25
Tungstate, tech., kgs., dlvd. E lb. 1.80 - —
Sodium-ammonium phosphate, bbls., works, frt. equald lb .23 - —
Sodium-carboxymethyl cellulose (see CMC).
Sodium-cinchophen (see Cinchophen sodium).
Sodium-formaldehyde sulfoxylate, dms., c.l., dlvd lb. .21 - —
t.c.l., same basis lb. .21½- —
Sodium-zirconyl sulfate, fiber dms., 1,000-lb lots or more works lb. .28 - —
smaller lots, same basis lb. .30 - —
Solvent naphtha, coaltar, high flash, tanks, works gal. .31 - .35
petroleum (see Petroleum solvent, partial aromatic).
Sorbitan monostearate, fib. dms., 20,000-lb. lots, works lb. .32 - —
10,000 to 20,000-lb. lots, works, lb. .34 - —
smaller lots, works lb. .37 - .39
Tristearate, fib. dms., 20,000-lb. lots, works lb. .33 - —
10,000 to 20,000-lb. lots, works. lb. .35 - —
smaller lots, works lb .36 - .40
Sorbitol, cryst., pellets, dms., c.l., works lb. .30 - —
1 to 5-ton lots, works lb. .32 - .33
powd., dms., 1 to 5-ton lots, works, lb. .38 - .39
soln., coml., aqueous, dms., c.l., works lb. .24½- —
ton lots, works lb. .25 - —
smaller lots, works lb. .25¼- —
tanks, works lb .23¼- —
reg., 70%, aqueous, dms., c.l., works lb. .16 - —
ton lots, works lb. .16¾- —
smaller lots, works lb. .17 - —
tanks, works lb. .15 - —
Soybean meal, 44%, bulk, Decatur. ton 68.00 - —
protein, chemically isolated, 40,000 to 60,000-lb. lots, dlvd. lb. .25 - —
20,000 to 40,000-lb. lots, same basis lb. .25¼- —
100 to 20,000-lb. lots, same basis lb. .25½- —
Soybean protein, mechanically refd., bgs., 40,000-lb lots., same basis lb. .0605- —
20,000-lb. lots, same basis lb. 0620- —
smaller lots, same basis. lb. .0635- —
Sparteine sulfate, cns oz. .85 - .95
Spearmint leaves, dom., bls lb. .75 - —
imp., bls lb. 1.25 - —
Spruce, extract, liq., reg. tanks, works lb. .01¾- —
powd., super, bgs., c.l., works. lb. .05¼- —
t.c.l., works lb. .05½- —
Squill, white, bls lb. .17 - .19
powd., t bls., bxs lb. .18 - .21
St. John's bread, edible, bls lb. .13 - .15
Stannic chloride, anhyd., dms., works lb. .743 - .755
Oxide, dms., dlvd. E lb. .95 - .96
Stannous chloride, anhyd., cms., works lb. .793 - 1.06
Hydrous (crystals), dms., works. lb. .75 - .90
Sulfate, dms., works lb. .912 - .932
Starch, corn, pearl, paper bgs., c.l. 100 lbs. 7.14 - —
t.c.l. 100 lbs. 7.29 - —
powd., paper bgs., c.l 100 lbs 7.26 - —
t.c.l. 100 lbs. 7.41 - —
Prices for corn starch in cotton bags 25c. per 100 lbs higher.
Potato, dom., Idaho, bgs., c.l., works lb. .06¾- —
Maine, bgs., c.l., works lb. .05¼- —
t.c.l., spot lb. .05¼- .05½
Rice, bgs., t.c.l. lb. .15½- .16
Wheat, bgs. lb. .0755- .0780
Star root (see Helonias root).
Stargrass Root (see Aletris root).
Stavesacre seed, bgs lb. .60 - .61
Stearine oleo (see Oleostearine).
Stomach substance, not USP, 100-lb. fib. dms lb. 2.90 - —
Stramonium leaves, bgs lb. .18 - .20
Streptomycin hydrochloride, bulk, gram. .15 - —
Sulfate, bulk gram. .15 - —
Strontium bromide, NF, cns., dms. lb. .77 - .78
Carbonate, pure, dms., 5-ton lots or more, works lb. .35 - —
1-ton lots, works lb. .37 - —
tech., dms., works lb. .19 - —
Chromate, bbls., works lb. .46 - —
Iodide, jars, 25-lb. lots lb. 3.42 - —
Nitrate, bbls., cs., works lb. .11 - .12
Salicylate, NF, dms lb. 1.65 - —
Sulfate, air floated, 90%, 325 mesh, bgs., works ton. 56.70 - 66.15
Strophanthin, K, bots oz. 25.00 - 25.50
G, (see Ouabaine, USP).
Strophanthus seed, Kombi, biologically tested, bgs lb. 3.50 - 3.75
Styrax, USP, cs lb. .78 - .80
Strychnine, NF, powd., cns., 100-oz. lots oz. 1.10 - —
Phosphate, NF, cns., 100-oz. lots. oz. 1.14 - —
Sulfate, USP, powd., cns., 100-oz. lots oz. .85 - —
crystals, 25-oz. lots oz. .96 - —
Styrene monomer, dms., c.l., works. lb. .23¼- —
t.c.l., works lb. .23¼- —
tanks, works lb. .21 - —
Styrolyl acetate, bots lb. 1.45 - 1.70
Sucrose, refd., white, bgs., refy., E. 100-lbs. 8.65 - —
Octa-acetate, denaturing grade, 100-200-lbs., bgs., t.c.l., works. lb. .76 - —
Sulfabenzamide, dms lb. 4.00 - 4.50
Sodium, dms lb. 4.10 4.60
Sulfacetamide, fib. dms lb. 4.00 - 4.20
Sodium fib. dms lb. 5.00 5.20
Sulfadiazine, USP, microcrystals, dms lb. 10.60 -11.10
powd., dms lb. 10.25 -10.75
Sulfadiazine-sodium, USP, dms lb. 11.25 -11.75
microcrystals, dms lb. 10.60 -11.10
Sulfaguanidine, USP, dms lb. 2.50 - —
Sulfamerazine, USP, microcrystals. lb. 10.65 -11.15
Sulfamerazine-sodium, USP, dms., lb. 11.25 -11.75
Sulfamethazine, microcrystals, dms., lb. 8.90 - 9.40
powd., dms lb. 8.50 - 9.00
Sulfanilamide, USP, 30-80 mesh., dms lb. 1.40 - 1.60
microcrystals, dms lb. 1.70 - 1.90
powd., dms lb. 1.30 - 1.50
Quinoxaline, veterinary, dms lb. 6.50 - 6.75
Sulfapyridine, NF, powd., bots., tins. lb. 7.00 - 7.50
Sulfapyridine-sodium, monohydrate, dms lb. 7.50 - 8.00
Sulfathiazole, USP, microcrystals, dms lb. 3.15 - 3.30
powd., dms lb. 2.80 - 2.95
Sulfathiazole-sodium, USP, dms lb. 3.05 - 3.20
Sulfur, coml., flour, bgs., mines. 100 lbs. 2.30 - —
bbls., mines 100 lbs. 3.05 - —
lump, bgs., mines 100 lbs. 2.20 - —
bbls., mines 100 lbs. 2.65 - —
crude, bulk, c.l., mines, contract. long-ton 26.50 - —
export, f.o.b. vessels, Gulf ports long-ton 31.00 -33.00
domestic and Canada, f.o.b. vessel Gulf port long-ton 28.00 -29.50
refd., flowers, USP, bgs., mines. 100 lbs. 4.00 - —
bbls. 100 lbs. 5.25 - —
flour, light, bgs., mines 100 lbs. 3.60 - —
bbls., mines 100 lbs. 4.50 - —
lump, bgs., mines 100 lbs. 3.30 - —
rolls, bgs., mines 100 lbs. 3.85 - —
bbls., mines 100 lbs. 4.40 - —
salt block, bgs., mines 100 lbs. 3.50 - —
virgin block, bbls., mines 100 lbs. 3.45 - —
rubbermakers, coml., reg., bgs., mines 100 lbs. 2.40 - —
bbls., mines 100 lbs. 3.55 - —
98-100% passing through 325 mesh, bgs., mines 100 lbs. 2.50 - —
bbls., mines 100 lbs. 3.65 - —
refd., bgs., mines 100 lbs. 3.25 - —
bbls., mines 100 lbs. 4.30 - —
treated, 2.5% mineral oil, bgs., mines 100 lbs. 2.70 - —
bbls., mines 100 lbs. 3.85 - —
10% pine tar, bgs., mines. 100 lbs. 3.90 - —
Dichloride, dms., c.l., works, frt. equald lb. .03¾- —
t.c.l., same basis lb. .04½- —
tanks, same basis lb. .03½- —
Dioxide, liq., coml., cyls., works. lb. .09 - —
multi unit cars, works lb. .0535- —
tanks, works lb. .045 - —
refrigeration, cyls., c.l., dlvd lb. .24 - —
Monochloride, 55-gal., dms., c.l., frt. equald lb. .03¾- —
t.c.l., same basis lb. .04½- —
tanks, same basis lb. .03½- —

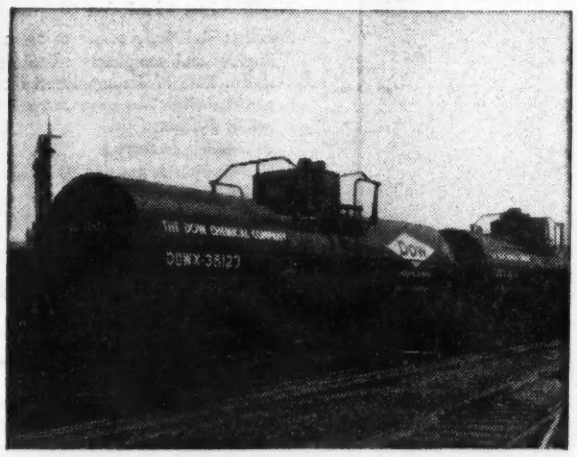


THE ECONOMIES OF 73% CAUSTIC SODA SOLUTION are no longer reserved for the largest users . . . lower shipping costs now make it the best form for you, too.

DOW

73% CAUSTIC SODA...

a little figuring may prove it your best buy!



FAST, DEPENDABLE DELIVERY of uniform 73% caustic solution is assured through use of Dow-owned tank cars. These 8,000- and 10,000-gallon cars are insulated, protectively lined, and fitted with nickel heating coils; unload from top or bottom by air pressure or pump. Frangible discs, protective plug cocks are two of the advanced safety features.

How long has it been since you have checked your caustic buying habits in the light of increasing cost factors? Higher freight rates are erasing the savings in 50% caustic solution for more and more users every day. Even users located near shipping points save money with 73%, since the higher price of even shorter distance hauls quickly wipes out the price difference between 73% and 50%.

73% caustic must be diluted when received, but most caustic users dilute 50% solution, too. The cost of additional handling equipment for dilution, when fairly amortized, becomes a small item in comparison to your over-all cost reduction.

If you are still buying 50% caustic solution, discussion in your plant and consultation with our Alkali Technical Service is indicated. Perhaps the comprehensive Dow Caustic Soda Handbook can help you in preliminary discussion. Ask your Dow sales representative for your free copy or write to THE DOW CHEMICAL COMPANY, Dept. AL-901A-1 Midland, Michigan.

you can depend on DOW CHEMICALS DOW

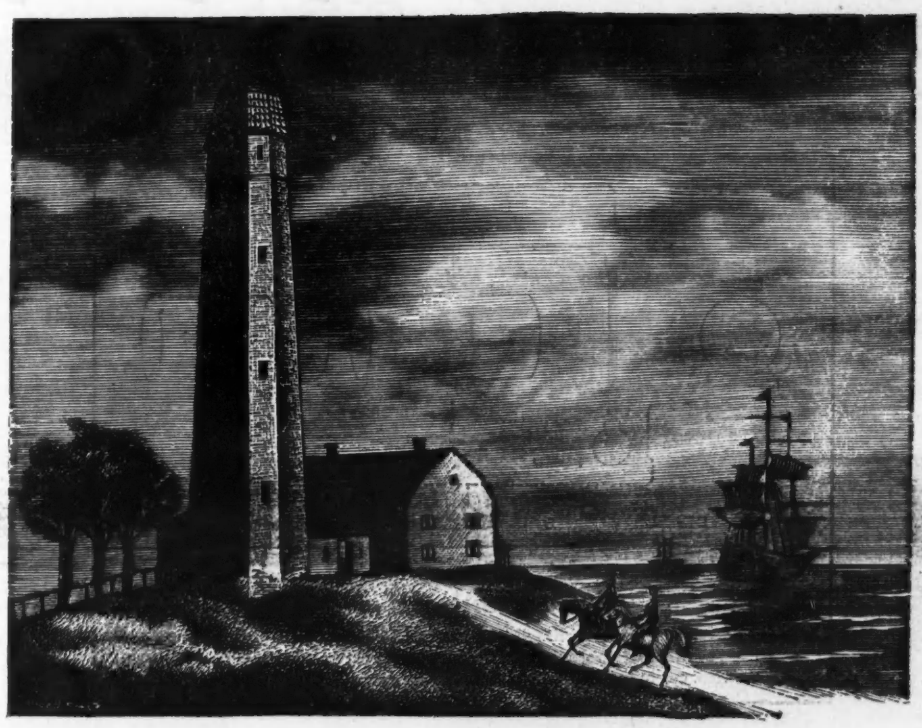
Sumac leaves, 28%, bgs., ex-dock, ton 125.00 - —
ground, bgs., ex-dock ton 120.00 - —
Superphosphate, run-of-pile, under 22% a.p.a. pulv., bulk, c.l., Balto., unit-ton. .88 - .91
Carteret, N. J. unit-ton. .88 - .91
Triple, 46% or more, a.p.a. pulv., bulk, c.l., East Tampa, Fla. unit-ton. .98 - —

T

2,4,5-T dms., c.l., works, frt. equald. lb. 1.25 —
l.c.l., same basis lb. 1.30 2.30
Isopropyl, ester, dms., c.l., works, frt. equald lb. 1.30 - —
l.c.l., works lb. 1.35 - —
Talc, dom., ord., Calif., grad., bgs., c.l. works ton 32.00 -38.50
Vermont off color, grd., bgs., c.l., works ton 14.00 - —
l.c.l., works ton 17 50 —
fibrous, New York, grd., bgs., c.l., works ton 25.00 -30.00
l.c.l., works ton 28.00 -30.00
99.5%, 325 mesh, bgs., c.l., works ton. 27.00 —
l.c.l., works ton 30 00 -32 00
99.95% micronized, bgs., works ton 36.00 - —
imp., Canadian grd., bgs., c.l., mines ton 15 25 - 35.00
Tallow, edible, tanks, dlvd lb. .14 - —
inedible, extra, tanks, dlvd lb. .07½- —
fancy, bleachable, tanks, dlvd. lb. .07¾- —
No. 1, tanks, dlvd lb. .06¾- —
special tanks, dlvd lb. .07¼- —
sulfonated, 25%, bbls., l.c.l. lb. .07¾- .08
50% bbls., l.c.l. lb. .09¾- .10
Tankage, animal, feeding, 9-11% ammonia, bulk unit-ton. 6.75 - —
Chicago unit-ton. 7.25 - —
Tapioca flour, Brazilian, ex whse, bgs lb. .08¾- .09
Java, AAA, bgs. ex whse., bgs. lb. .06¾ Nom.
AA, bgs., ex-whse lb. .06½ Nom.
Siamese lb. .07 - .07½
Tar acid oil, 15-18%, dms., c.l., frt. equald gal. .47 - .49
l.c.l., same basis gal. .50 - .51
tanks, same basis gal. .39 - —
25-28%, dms., c.l., same basis. gal. .54 - .56
l.c.l., same basis gal. .57 - .58
tanks, same basis gal. .46 - —
50-53%, dms., c.l., same basis. gal. .70 - .72½
l.c.l., same basis gal. .73½- .74½
tanks, same basis gal. .62½- —
Coal (see Coaltar).
Tartar emetic (see Antimony-potassium tartrate).
Terpine glycol ether, dms., c.l., works lb. .23½- —
l.c.l., works lb. .25½- —
tanks, works lb. .22 - —
Hydrate, coml., bbls., c.l. lb. .24½- —
l.c.l. lb. .25 .25½
NF, cryst., fib. dms lb. .57½- .62
powd., fib., dms lb. .65 .69
a-Terpineol, dms., l.c.l., dlvd. E lb. .19 - —
Terpineol, coml., dms., c.l., South. lb. .13½- —
l.c.l., South lb. .14 - —
extra dms lb. .41 - .60
prime, dms lb. .30 - .45
Terpinyl acetate, extra, cns., dms. lb. .60 - .75
prime, dms lb. .55 - .70
Propionate, dms. lb. 1.75 - 2.00
Terra alba, (see Gypsum).
Testosterone, USP, 100-gm. lots, bots. gram. .79 - —
Propionate, USP, 100-gm. lots, bots. gram. .73 - —
Tetrachloroethane, dms., works lb. .14½- —
Tetrachlorethylene, tech. (see Perchloroethylene).
USP, 55 gal. dms., works lb. .20½- .21½
smaller dms., works lb. .23½- .25
Tetraethyl orthosilicate, dms., c.l., dlvd. E lb. .64 - —
l.c.l., dlvd. E lb. .65 - —
Pyrophosphate, 40%, cns., dms., frt. equald lb. .69 - —
Tetraethylenepentamine, dms., c.l., dlvd. E lb. .57½- —
l.c.l., dlvd. E lb. .58½- —
tanks, dlvd. E lb. .56 - —
Tetrapotassium phosphate (see Potassium phosphate).
Tetrasodium pyrophosphate (see Sodium pyrophosphate).
Thallium metal, dlvd lb. 12.50 -15.00
Sulfate, 99%, bots., dlvd lb. 8.00 -13.00
Theobromine, NF, fib. dms lb. 3.75 - —
And sodium acetate, USP, fib dms lb. 4.05 - 4.10
Sodio-Salicylate, NF, fib. dms. lb. 3.35 - 3.40
Theophylline, anyhd. or USP, 100-lb. dms lb. 3.65 - —
Thiamine hydrochloride, USP, regular or ampul-type, fib. dms. kilo. 100.00 - —
Mononitrate, USP, fib. dms. kilo. 100.00 - —
Thiocarbanilide, dms. lb. .50 - .53
Thiodiphenylamine (see Phenothiazine).
Thiophene, dms., c.l., works lb. No stocks
Thiourea, tech., dms., c.l., works lb. .40 - —
l.c.l., works lb. .42 - —
Thorium nitrate, purif., fib. dms., 100-lb. lots or more, works lb. 3.50 - —
dl-Threonine, bots., 1-kilo lots kilo. 450.00 -500.00
Spanish, bgs. lb. .10 - —
Thyme leaves, French, bgs lb. .20 - —
Thymol, fib. dms lb. 2.75 - 3.00
Iodide, NF, dms lb. 7.50 - —
Timbo root (see Cube root).
Tin chloride (see Stannous chloride, anhydrous).
crystals (see Stannous chloride, hydrous).
Metal (Straits) lb. .90 - —
Oxide (see Stannic oxide).
Sulfate (see Stannous sulfate).
Tetrachloride anhyd. (see Stannic chloride, anhydrous).
Titanium dioxide anatase, chalk resistant, bgs., c.l., dlvd lb. .22½- —
l.c.l., dlvd. lb. .23½- —
ceramic, bgs., c.l., dlvd lb. .22½- —
l.c.l., dlvd. lb. .23½- —
reg., bgs., c.l., dlvd lb. .22½- —
l.c.l., dlvd. lb. .23½- —
Metallurgical, nat., gran., bgs., c.l., f.o.b. Jacksonville, Fla. ton 120.00 - —
Niagara Falls, N. Y. ton 137.50 - —
5-ton lots, same basis. ton 142.50 - —
ton lots, same basis. ton 147.50 - —
Milled titanium dioxide $7.50 per ton higher.
rutile, non-chalking, bgs., c.l., dlvd. E lb. .24½- —
l.c.l., dlvd. E lb. .25½ —
Hydride, cns., works lb. 7.95 - 9.00
Titanium pigment, calcium-rutile base, bgs., c.l., dlvd lb. .08¾- —
l.c.l., dlvd lb. .08⅞- —
Tetrachloride, tech., dms., c.l., works lb. .40¾- —
l.c.l., works lb. .43¾- —
tanks, works lb. .39¾- —
dl-a-Tocopherol, bots kilo. 149.65 - —
Acetate, bots kilo. 136.00 - —
o-Tolidine base, dist., kgs lb. 1.30 - —
Tolu balsam, cns lb. 4.25 - —
Toluene (see Toluol).
p-Toluenesulfonamide, flake, dms., frt. alld lb. .64 .66
powd., works lb. .70 - —
solid, frt. alld lb. .61 - —
m-Toluidine, dms., c.l., works, frt. alld lb. .79 - —
l.c.l., same basis lb. .80 - —
tanks, same basis lb. .78 - —
o-Toluidine, dms., c.l., works, frt. alld lb. .23 - —
l.c.l., same basis lb. .24 - —
tanks, same basis lb. .22 - —
p-Toluidine, flake, dms., frt. alld lb. .64 - —
solid, dms., frt. alld. lb. .60 - .61
Toluol, coaltar, indust. or nitration, tanks, works:—
Bethlehem, Pa. gal. .34 - —
Birmingham dist gal. .32 - —
Chicago dist gal. .35 - —
Cleveland, dist gal. .34½ .35
Geneva, Utah gal. 26 - —
Johnstown, Pa. gal. .32 - —
Lackawanna, N. Y. gal. .35 - —
Lone Star, Tex. gal. .33 - —
Lorain, Ohio gal. .33 - —
Minnequa, Colo gal. .32 - —
Philadelphia district gal. .34 - —
Pittsburgh dist gal. .32 - —
Sparrow's Point, Md gal. .34 - —
Terre Haute, Ind gal. .35 - —
Youngstown, Ohio gal. .32½ .33
Toluol, petroleum, indust., 2° tanks, works:—
Albany, N. Y. gal. .34 - —
Bayonne, N. J. gal. .34 - —
Baytown, Tex. gal. .33 - —
Chicago, Ill. gal. .33 - —
Detroit, Mich gal. .35 - —
Houston, Tex. gal. .35 - —
Philadelphia, Pa. gal. .34 - —
Providence, R. I. gal. .35 - —
Wood River, Ill gal. .35 - —
2,4-Tolylenediamine, cryst., fib., ms., frt. alld lb. .94 - —
powd., same basis lb. 1.00 - —
Tonka beans, Angostura, cks lb 1.65 1.80
Brazilian, Surinam, cs lb. 1.00 1 25
Totaquine, 100-oz. lots, cns oz. .42 —
Toxaphene, dms., c.l., truckloads, works lb. .19 - —
ton lots to truckloads, works lb. .22 - —
smaller lots, works lb. .23 - —
Triacetin, dms. c.l. dlvd E. of Rockies lb. .39 - —
l.c.l., same basis lb. .40 - —
tanks, same basis lb. .37 - —
Tributyl citrate, tech., dms., c.l., works lb. .40½- —
l.c.l., works lb. .41½- —
tanks, works lb. .39 - —
Phosphate, dms., c.l., works lb. .52 - —
l.c.l. same basis lb. .53 - —
tanks, same basis lb. .50 - —
Tributylamine, dms., c.l., works. lb. .67 - —
l.c.l., same basis lb. .68 - —
tanks, same basis lb. .65 - —

Sumac Leaves—Triethyl Phosphate

Trichlorobenzene, dms., c.l., works, frt. alld. E lb. .14½- —
l.c.l., frt. alld E lb. .15½- —
tanks, frt. alld. E lb. .13 - —
Prices in the West 1¾c. higher.
Trichloroethylene, dms., c.l. or truckloads, works, frt. equald. lb. .11¼ —
dlvd. E lb. .12½ —
l.c.l., dlvd. E lb. .13½ —
tanks, works, frt. equald lb. .10¼ —
dlvd. E lb. .11 —
Trichloroethane, dms., c.l., works. lb. .13 —
l.c.l., works lb. .13½ —
tanks, works lb. .11½ —
Tricholine citrate, 65% soln., ret. chys., works, frt adjusted lb. 1.40 1 45
Trieresyl phosphate, coaltar, dms., c.l., dlvd lb. .35 —
l.c.l. dlvd. lb. .36 —
tanks, dlvd lb. .33 —
petroleum, dms., c.l., dlvd lb. .35 —
l.c.l. dlvd lb. .36 —
tanks, dlvd lb. .33 —
Triethanolamine, dms., c.l., dlvd. E lb. .21¾ .23¼
l.c.l., same basis lb. .22¾ .24¼
tanks, same basis lb. .20 - .21½
Triethylamine, dms., c.l., works, dlvd. E lb. .47 —
l.c.l., same basis lb. .48 - —
tanks, same basis lb. .45 - —
Triethyl citrate, tech., refd., dms., c.l., works lb. .48 - —
l.c.l., works lb. .53 - —
tanks works lb. .45¾- —
Phosphate, dms., c.l., works lb. .38 - —
l.c.l. same basis lb. .39 - —
tanks, same basis lb. .37 - —



FAMOUS LIGHTHOUSES OF AMERICA

SANDY HOOK LIGHTHOUSE, built in 1764 by the Colony of New York, is the oldest original light tower in use in the United States. A massive structure, octagonal in form with walls of stone seven feet thick at the base, it stands today as it was built except for an added inner lining of brick. This famous lighthouse is located on a narrow peninsula on the New Jersey coast sixteen miles due south of New York City and still helps to guide ships into New York's lower bay.

Sure guidance for users of electrochemicals is the long-recognized quality of Niagara Alkali products. A pioneer in this field, Niagara has helped manufacturers improve their products and the efficiency of their processes through the use of Nialk® Liquid Chlorine, Nialk Caustic Potash, Nialk Carbonate of Potash, Nialk Paradichlorobenzene, Nialk Caustic Soda, Nialk TRICHLORethylene, Niagathal® (Tetrachloro Phthalic Anhydride).

NIAGARA ALKALI COMPANY
60 East 42nd Street, New York 17, N. Y.

Triethylene Glycol—Wormseed

Triethylene glycol, dms., c.l., dlvd. E lb. .18¼- .19¾
l.c.l., same basis lb. .19¼- .20¾
tanks, same basis lb. .16½- .18
Triethylenetetramine, dms. c.l., dlvd E lb. .48½- —
l.c.l., dlvd. E lb. .49½- —
tanks, dlvd E lb. .47 - —
Trimethylamine, 25-30% soln., dms., c.l., works, frt. equald., 100% basis lb. .42 - —
l.c.l., works, frt. equald, 100% basis lb. .42½- —
tanks, works, frt. equald, 100% basis lb. .33 - —
Tripentaerythritol, bgs., l.c.l., works. lb. .35 - —
Triphenyl phosphate, bbls., c.l., frt. equald lb. .39 - —
l.c.l., frt. equald lb. .40 - —
Triphenylguanidine, bbls., works lb. .90 - —
Tripropylene glycol, dms., c.l., frt. alld. E. lb. .19¾- —
l.c.l. frt. alld. E. lb. .20¾- —
Prices 1c. per lb. higher in
Trisodium fluoroacetate (see Sodium fluoroacetate, tribasic)
Phosphate (see Sodium phosphate tribasic).
west.
Trypsin, pharmaceutical, 1:75 dms., works lb. 3.95 - —
dl-Tryptophane, fib. ctns., works. kilo.165.00 - —
Tuba root (see Cube root)
Tungsten metal, powd., 98.8%, dms., dlvd lb. 4.95 - —
Turpentine, gum (see Protective Coatings market, Naval Stores).
Tyrothricin, USP, bots. gram. .75 - .85

U

Urethane, USP, dms lb. 1.50 - —
Unicorn root, false (see Helonias root).
True (see Aletris root).
Urea, dom., 46% N, bgs., c.l., works. ton.110.00 -120.00
45% N, bgs., c.l., 30 tons, dlvd. Kan., Neb., N. Dak., Okla., S. Dak., Tex., and E ton.154.00 -137.00
Urea-ammonia liquor, A and B grades N basis, tankcars, Belle, W Va ton.128.00 - —
C grade, tankcars, same basis. ton.126.50 - —
37 grade, tankcars, same basis. ton.155.50 - —
Uva ursi leaves, bls. lb. .12 - .14

V

Valerian root, Belgian, bgs. lb. .38 - .40
dl-Valine, dms., works lb.21.00 -27.50
Valonia beards, 40-42% tannin, bgs., ex dock ton.56.00 - —
cups, 28-30% tannin, bgs., ex-dock ton.45.00 - —
extract, powd., 63% tannin, bgs., ex-dock, duty extra lb. .08¼- —
Vanadium pentoxide, tech., dms., works lb. 1.28 - 1.33
Vanilla beans, Bourbon, tins lb.10.50 -11.00
Mexican, cuts, tins lb.10.25 Nom.
whole, tins lb.10.50 -11.00
Tahiti, cs. lb.10.25 Nom.
Vanillin, ex eugenol, tins, 25-lb. lots. lb. 6.50 - 6.75
smaller lots lb. 6.90 - 7.25
ex guaiacol, tins, 25-lb. lots lb. 3.00 - —
smaller lots lb. 3.05 - 3.15
ex lignin, tins, 25-lb. lots lb. 3.00 - —
smaller lots, tins lb. 3.05 - 3.15
Vinyl acetate monomer, 55-gal. dms., c.l., dlvd. E lb. .18½- —
l.c.l., dlvd. E lb. .19½- —
tankcars, dlvd. E lb. .16½- —
tanktrucks, dlvd. E lb. .17½- —
n-Butyl ether, tech., dms., c.l., works lb. .28 - —
l.c.l., works lb. .30 - —
tanks, works lb. .27 - —
Chloride monomer, cyls., frt. equald lb. .26 - —
tanks, same basis lb. .13¼ —
Ether, USP, anesthesia, bots., 50 c.c., hospitals, bot. 1.12 - —
75 c.c. bot. 1.56 - —
Ethyl ether, tech., dms., c.l., works. lb. .26 - —
l.c.l., works lb. .28 - —
tanks, works lb. .25 - —
Isobutyl ether, tech., dms., c.l., works lb. .28 - —
l.c.l., works lb. .30 - —
tanks, works lb. .27 - —
Methyl ether, cyls., works lb. .23 - —
tanks, works lb. .20 - —

Cylinders are sold outright, or if shipped against deposit, a free period of 60 days is allowed; and if empties are returned prepaid and in good condition within that period, full refund is made.

Trichloride (see Trichloroethane).
2-Vinylpyridine, dms., works lb. 1.40 - 1.50
Vinyltoluene, dms., c.l., works lb. .20¼- —
l.c.l., works lb. .21¼- —
tanks, works lb. .19 - —
Viosterol, in alcohol, 1,000,000 D units per gram, bots., lots of 10 billion USP units, 1,000,000 units. .025 - —
lots of 1 billion USP units, 1,000,000 units. .03 - —
lots of less than 1 billion USP units 1,000,000 units. .035 - —
in nat., veg. oil, 400,000 to 1,000,000 D units per gram, bots., lots of 10 billion USP units, 1,000,000 units. .02 - .04¾
lots of 1 billion USP units, 1,000,000 units. .025 - .05¼
lots of less than 1 billion USP units, 1,000,000 units. .03 - .05¾
Vitamin A synthetic, acetate crystalline beads, 500,000 A units per gram gram. .07¼- —
liquid in oil 1,000,000 A units per gram. 1,000,000 units. .12 - —
Palmitate, liq., 1,000,000-1,800,000 A units per gram 1,000,000 units. .12 - —
in oil, 1,000,000 A units per gram 1,000,000 units. .12 - —
B (see Thiamine hydrochloride).
B_2 (see Riboflavin.
B complex, natural (see Rice bran concentrate and Yeast).
B_6 (see Pyridoxine hydrochloride).
B_{12} crystalline, 1-gram or 5-gram vials gram.245.00 - —
oral grade solids, in containers of 1 and 5 grams of B_{12} activity gram.185.00 - —
C (see Acid, ascorbic).
D (see Oils, codliver and fish-liver, Calciferol, and Viosterol).
D_2 (see Calciferol).
E (see a-Tocopherol and Oil, wheat germ).
G (see Riboflavin).
H (see Biotin)
Vitamin K, Active (see Menadione).
K_1, 25 gram bots. gram. 4.50 - —
Violet methyl toner (see Blue methylviolet toner
V.M.&P. naphtha (see Petroleum naphtha).

W

Wahoo root, bark, bls. lb. 2.50 Nom.
Warfarin, 0.5%, dms., 50 lb lots, dlvd lb. 1.95 - —
25-49 lb. lots, f.o.b., N.Y., or Chi lb. 2.05 - —
5-24 lb. lots, cns., f.o.b., N. Y., or Chi lb 2.15 - —
Wattle bark, fair average, African, bgs., ex dock ton.98.00 - —
merchantable, bgs., ex dock ton.94.00 - —
extract, liq., 35% tannin, bbls. lb. .09¾- .10
solid, E. Africa, 60% tannin, bgs., ex dock, duty extra lb. .10 - —
S. Africa, 60% tannin, bgs., ex-dock, duty extra lb. .10 - —
Wax, amorph, (see Wax microcrystalline)
Bayberry, bgs., spot lb. .42 - .45
Bees, crude, African, bgs. lb. .55 - .56
Brazilian bgs lb. No stocks.
Central American, bgs. lb. .57 - .58
Chilean, bgs. lb. .57 - .58
refd., bleached, white, bricks. lb. .73 - .75
slabs lb. .72 - .74
yellow, bricks lb. .60 - .61
slabs lb. .59 - .60
Candelilla, crude, bgs. lb. .64 - .66
refd., bgs lb. .67 - .69

Powdered candelilla, 20 mesh, 7c. per lb. higher, 80 mesh, 7c.; 100-200 mesh, 8c.

Carnauba, chalky, bgs., ton lots lb. .68 Nom.
North Country, No. 2, bgs., ton lots lb. .84 - .85
No. 3, Ceara, crude, bgs., ton lots lb. .70 - .72
refined, tech., bgs., ton lots lb. .73 - .75
pure, bgs., ton lots lb. .79 - .80
Parnahyba, crude, bgs., ton lots lb. .74 - .76
yellow, No. 1 Ceara, bgs., ton lots lb. 1.03 - 1.05
No. 2, bgs., ton lots lb. 1.01 - 1.03
No. 1, Parnahyba, bgs., ton lots lb. 1.10 - 1.12

Powdered carnauba wax price differentials same as powdered candelilla.

Japan, bgs lb. .50 Nom.
Microcrystalline, 170°-175°F., m.p., ASTM, penetration 15-20, amber, ctns., 20,000 lbs., group 3, works lb. .13 - .14
smaller lots, same basis. lb. .14 - .15
black, ctns., 20,000 lbs., same basis lb. .11½- .12¼
smaller lots, same basis. lb. .12½- .13½
white, ctns., 20,000 lbs., same basis lb. .24 - .25
smaller lots, same basis. lb. .35 - .36
180°-185° F.m.p., ASTM, penetration, 7-11; amber, ctns., 20,000-lb. lots, same basis. lb. .16 - —
smaller lots, same basis. lb. .17 - —
black, ctns., 20,000 lbs., same basis lb. .14½- —
smaller lots, same basis. lb. .15½- —
white, ctns., 20,000 lbs., same basis lb. .27 - —
smaller lots, same basis. lb. .28 - —
190°-195°F., m.p., ASTM, penetration 2-7, amber, ctns., 20,000 lbs., same basis lb. .20 - —
smaller lots, same basis. lb. .20½- —
black, ctns., 20,000 lbs., same basis lb. .18 - —
smaller lots, same basis. lb. .18½- —
white, ctns., 20,000 lbs., same basis lb. .33½- —
smaller lots, same basis. lb. .34½- —
Montan, dom., refd., bgs. lb. .31 - .32
imp., crude, Bohemian, bgs lb. .13 - .13½
German, bgs lb. .14 - .14½
Ouricury, refd., bgs lb. .95 - 1.00
Paraffin (see P).
Spermaceti, blocks, cs lb. .25½- .31
cakes, cs lb. .26½- .32
Sugar cane, dom., refd., slabs, works lb. .75 - .80
spot lb. .77¼- .82½
White lead (see Lead, white).
White pine bark, rossed, bls. lb. .18 - .19
White precipitate, USP, powd., dms. lb. 6.55 - —
Whiting (see Calcium carbonate).
Wild cherry bark, thin, nat., bls. lb. .18 - .19
rossed, bls lb. .19 - .22
Ginger (see Snake root, Canada).
Witch hazel bark, bls. lb. .16 - .17
leaves, bls. lb. .18 - .19
Woolfat, crude (see Degras).
USP (see Lanolin).
Wormseed, American, bgs. lb. .20 - .25
Levant, bgs. lb. 4.25 - 4.50

How to save money by buying and storing sorbitol in bulk

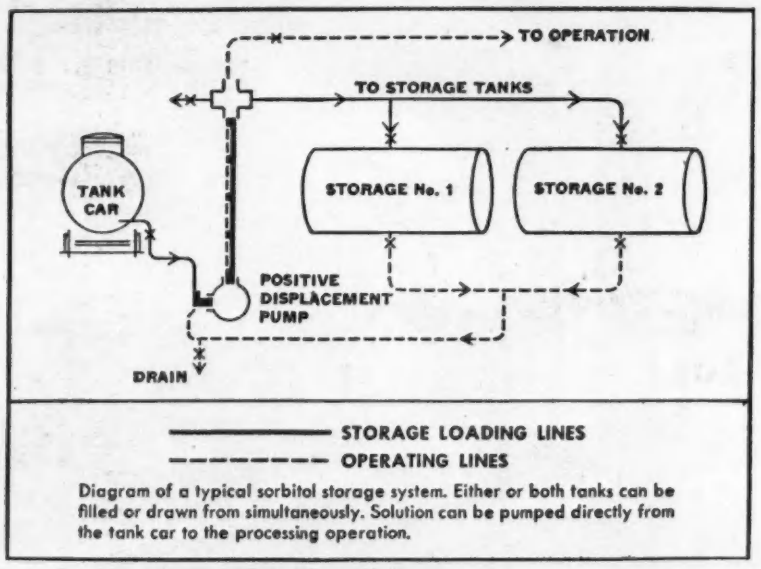


Diagram of a typical sorbitol storage system. Either or both tanks can be filled or drawn from simultaneously. Solution can be pumped directly from the tank car to the processing operation.

Purchasing sorbitol solutions—Sorbo®, Sorbitol Special or Arlex®—in tank car lots offers savings of $880 per 88,000-gallon tank car, as compared with the carload drum price. Handling costs, moreover, are substantially reduced by switching to bulk storage. Handling can be completely mechanized, warehouse space for drum storage is saved, and paper work and inventory labor are materially reduced. You get more complete utilization of sorbitol, for tank cars can be drained more thoroughly than drums.

Anyone accustomed to handling bulk chemicals will find sorbitol relatively simple to store. It is non-corrosive, non-inflammable, and does not decompose in storage. Under high humidity conditions it picks up less moisture than other common polyols. It is compatible with other polyols, sugar solutions, sulfonated oils, etc., and may be mixed with such materials in storage if desired. Since it is non-volatile, it creates no vapor problems.

TIPS ON STORAGE

Choosing Materials. The following is the usual order of preference of materials for tanks and piping:

1. Stainless steel (solid or clad)
2. Aluminum
3. Tanks coated with protective resin
4. Tanks protected with lining of tin, glass, rubber, etc.

Iron piping and tanks are not usually recommended since sorbitol, like many organic materials, will eventually "scour" the inside of an iron tank. This may lead to absorption of iron oxide and some discoloration.

Preventing Thickening in Winter. Sorbitol solutions, like many others, thicken at low storage temperatures. The highest purity solution, Sorbo, tends to crystallize. For easy handling, sorbitol solutions should be kept at 70°F. or higher. This can be done by heating with hot water or low-pressure steam circulated through submerged heating coils . . . taking care to avoid local overheating. Any crystallized sorbitol dissolves on reheating without affecting quality.

Pumping Sorbitol. A positive displacement pump made of stainless steel or aluminum is recommended for withdrawing sorbitol. The tank car can be "blown" instead of pumped, if facilities are available.

Your local Atlas representative will be glad to work with you on sorbitol storage. For technical and price information on sorbitol, write or call Atlas today.

CHEMICALS DEPARTMENT
ATLAS POWDER COMPANY
WILMINGTON 99, DELAWARE

offices in principal cities

ATLAS POWDER COMPANY, CANADA, LTD.
BRANTFORD, CANADA

X

Xylene (see Xylol).

Xylenol, cryst., 58°-60°C., m.p., dms., l.c.l., works	lb.	.40	—
58°-58°C., dms., l.c.l., works, frt. equald	lb.	.30	—
45°-47°C., dms., c.l., same basis.	lb.	.212	—
l.c.l., same basis	lb.	.215	—
tanks, same basis	lb.	.199	—
fractions, over 7°C., b.r., except meta, dms., c.l., same basis	gal.	.90	—
l.c.l., same basis	gal.	.99	—
tanks, same basis	gal.	.85	—
meta fraction, over 7°C. b.r., ums., c.l., same basis	gal.	1.01	—
l.c.l., same basis	gal.	1.04	—
tanks, same basis	gal.	.90	—
Xylidines, mixed, dms., c.l., truckload, works	lb.	.39	—
l.c.l., same basis	lb.	.40	—
tanks, same basis	lb.	.38	—
Xylol, coaltar, indust., tanks, works, Bethlehem, Pa	gal.	.34	—
Birmingham district	gal.	.32	—
Chicago district	gal.	.35	—
Cleveland district	gal.	.35	—
Geneva, Utah	gal.	.27	—
Johnstown, Pa.	gal.	.33	—
Lackawanna, N. Y.	gal.	.35	—
Lone Star, Tex.	gal.	.33	—
Lorain, Ohio	gal.	.33	—
Minnequa, Colo.	gal.	.34	—
Philadelphia district	gal.	.34	—
Pittsburgh district	gal.	.32	—
Sparrows Point, Md.	gal.	.34	—
Terre Haute, Ind.	gal.	.35	—
Youngstown, O.	gal.	.32½	—
petroleum, indust., tanks, works:— Bayonne, N. J.	gal.	.34	—
Baytown, Tex.	gal.	.33	—
Chicago, Ill.	gal.	.35	—
Houston, Tex.	gal.	.35	—
Philadelphia, Pa.	gal.	.34	—
Providence, R. I.	gal.	.35	—
Wood River, Ill.	gal.	.35	—

Y

Yara yara, ens	lb.	2.15	2.95
Yeast, brewer's, dry, USP, 50 Int'l B units per gram, 100-lb. dms	lb.	.47	—
90 Int'l B units per gram, 100-lb. dms	lb.	.52	—
200 Int'l B units per gram, 100-lb. dms	lb.	.56	—
300 Int'l B units per gram, 100-lb dms	lb.	.60	—
Yellow, barium chromate, CP, bbls., dlvd. N. l.c.l., dlvd. N. of Tenn. and N. C., E. of Miss., including Davenport, Minneapolis, Rock Island St. Louis St Paul	lb.	.35	—
Yellow barium chromate price differentials in other States and city zones are those for chrome yellow below			
Benzidine AAA, bbls., dlvd	lb.	1.91	—
AAOT bbls.	lb.	2.15	—
Cadmium, CP, all shades, bbls., frt. alld. E. of Rockies	lb.	2.85	—
lithopone, all shades, bbls., frt. alld., E of Rockies	lb.	1.15	—
Cadmium yellows, Los Angeles and San Francisco, ex whse., 1c. per lb. higher.			
Chrome, CP, bbls., dlvd. N. Tenn., and N. C., E. of Miss., including Davenport, Minneapolis, Rock Island	lb.	.31	—
Dlvd Ala., Fla., Ga., La. (Shreveport, 1¼c. higher); Miss., N. C., S. C., Penna., Dallas, Tex., 1¼c higher; Ft. Worth, Tex., 1½c. higher; El Paso, Tex. 2c. higher; Cedar Rapids, Des Moines, Kansas City, Lincoln Omaha, St. Joseph, 1.6c. higher dlvd. Pac. Coast; for Denver, Pueblo, Salt Lake City Wichita prices are equalized with Chicago			
Hansa, 10 G, bbls., same basis as yellow, chrome	lb.	2.15	—
G pigment, bbls	lb.	1.91	—
Iron oxide, natural, French type, bgs., c.l., works	lb.	.05¼	—
Peruvian type, bgs., l.c.l	lb.	.038	—
pure, bgs., c.l., works	lb.	.10½	—
l.c.l., works	lb.	.10¾	—
Mercury oxide, bbls., 1,000-lb. lots.	lb.	5.58	—
smaller lots	lb.	5.60	—
Ocher (see Yellow, iron oxide, natural).			
Zinc (chromate), bbls., dlvd	lb.	.25	—
basic, dlvd	lb.	.30	—
Yerba santa leaves, bls	lb.	.40	.42
Yohimbine hydrochloride, bots, tin.	oz.	4.75	5.25

Z

Zein, bgs., 30,000-lb. lots, works	lb.	.38	—
1,000 to 30,000-lb lots, works	lb.	.40	—
smaller lots works	lb.	.43	—
Zinc acetate, tech., bbls., dms., works	lb.	.27	—
NF VIII, dms	lb.	.53	—
Borate, bgs., c.l., dlvd. E	lb.	.192	—
l.c.l., dlvd E	lb.	.202	—
Chloride, NF, gran., dms	lb.	.42	—
precipitated powd dms	lb.	.26	—
soln., 50%, dms., c.l., works.	100 lbs.	5.50	—
l.c.l., works	100 lbs.	6.10	—
tanks, works	100 lbs.	4.85	—
tech., fused, dms., c.l., works.	100 lbs.	10.10	—
l.c.l., works, dms	100 lbs.	12.60	—
gran., fib., dms., c.l., works	100 lbs	10.60	—
l.c.l., works	100 lbs.	11.00	—
Chromate (see Yellow, zinc).			
Cyanide, kgs., 1,000-lb. lots or more, works	lb.	.523	—
smaller lots, works	lb.	.543	—
Dust, pigment, bbls., c.l., works	lb.	.14¾	—
l.c.l., works	lb.	.15¾	—
Fluoride, bbls., works	lb.	.49	.50
Hydrosulfite, dms., c.l., frt. alld.	lb.	.21½	—
l.c.l., frt. alld	lb.	.23	.37½
Metal, prime western slabs, E. St. Louis	lb.	.11½	—
Naphthenate, liq., 8% Zn., dms., frt. alld	lb.	.24½	—
10% Zn. dms., frt alld	lb.	.30	—
Oxide, pigment, American process, lead-free, bgs., c.l., dlvd	lb.	.13½	—
l.c.l., dlvd	lb.	.14½	—
leaded 35%, bgs., c.l., dlvd	lb.	.14¼	—
l.c.l., dlvd	lb.	.15¼	—
50%, bgs., c.l., dlvd	lb.	.14⅝	—
l.c.l., dlvd	lb.	.15⅝	—
Zinc oxide, French process, eml., green seal, bgs., c.l., dlvd.	lb.	.15¼	—
l.c.l., dlvd	lb.	.16¼	—
red seal, bgs., c.l., dlvd	lb.	.14¾	—
l.c.l., dlvd	lb.	.15¾	—
white seal, bgs., c.l., dlvd.	lb.	.15¾	—
USP, ctns., c.l., dlvd	lb.	.16¾	—
l.c.l., dlvd	lb.	.17¾	—
Zinc oxide Pac. coast prices 1c. higher.			
Phenolsulfonate, NF, gran., dms.	lb.	.39	—
powd., dms.	lb.	.42	.49
Resinate, precip., 7.2-7.6% Zn, dms., frt. alld	lb.	.29	—
Silicofluoride, bbls., works	lb.	.12	.13
Stearate, tech., USP, ctns., c.l.,	lb.	.37	—
l.c.l.,	lb.	.38	.42
Sulfate cryst., 22% Zn, bgs., c.l., works, frt. alld	100 lbs.	8.05	—
l.c.l., same basis	100 lbs.	8.60	—
flake, 25½% Zn, bgs, works, 36% Zn, bgs., c.l., frt. alld.	100 lbs.	7.90	8.05
l.c.l., same basis	100 lbs.	8.65	8.80
powd., monohydrate, bgs., c.l., dlvd. E	100 lbs.	7.90	—
l.c.l., dlvd. E	100 lbs.	8.65	—
Zinc sulfate in bbls. 40c. higher.			
USP, gran dms	lb.	26	—
Sulride, pure, bgs., c.l., dlvd	lb.	.2530	—
Undecylenate, dms.	lb.	2.25	2.50
Yellow (see Yellow, zinc).			
Zinc-ammonium chloride ogs., c.l., works	100 lbs.	9.65	—
bbls., c.l., works	100 lbs.	10.25	—
l.c.l., bbls., works	100 lbs.	10.75	—
Zinc-formaldehyde sulfoxylate, basic, dms., c.l.	lb.	.25½	—
l.c.l.	lb.	.26	.41¼
normal, dms., l.c.l., works	lb.	.52	—
Zircon (G), gran., bgs., c.l., works.	lb.	.03½	—
5 tons to c.l., works	lb.	.03⅝	—
1 ton to 9,999-lb. lots, works.	lb.	.04	—
smaller lots, works	lb.	.06½	—
milled, bgs., c.l., works	lb.	.04½	—
	lb.	.04⅝	—
5 tons to c.l., works	lb.	.04⅝	—
1 ton to 9,999-lb. lots, works.	lb.	.04⅝	—
500 to 1,999-lb. lots, works.	lb.	.07½	—
Zircon (G) in barrels, 1c. higher.			
Zirconium acetate, 13% som. ZrO_2, c.l., 30,000 lbs. minimum, works	lb.	.23	—
Hydride, ens., works	lb.	7.00	8.45
Nitrate, dms., ex whse	lb.	4.50	7.00
Oxide, 92½%-99%, white, grd., bbls., or bgs., works	lb.	1.50	—
lump, electric-fused, bgs., c.l., works	lb.	.44	—
5-ton lots, works	lb.	.44½	—
1 ton to 9,999-lb. lots, lbs., works	lb.	.45	—
CP, white, grd., bbls., or bgs., works	lb.	1.50	—
lump, electric fused, bags, 500 to 1,999-lb. lots, works	lb.	.45½	—
smaller lots, works.	lb.	.48	—
milled, electric-fused, bgs., c.l., works	lb.	.59	—
5-ton lots, works	lb.	.59½	—
1 ton to 9,999-lb. lots, works	lb.	.60	—
500 to 1,999-lb. lots, works	lb.	.60½	—
smaller lots, works.	lb.	.63	—
Oxychloride, cryst., ctns., 5-ton lots, works	lb.	.35½	—

Witco Vice-Pres. Retires; Will Remain as Consultant

Carl J. Minnig, for many years a vice-president of Witco Chemical Company, New York, has retired, but is being retained as a consultant. Mr. Minnig has been long known in the carbon black field. Since 1937 he has served Witco-Continental interests throughout the United States. Prior to that time he was active in the development of new sources of gas supply to be used in the manufacture of carbon black and was instrumental in developing new gas fields and promoting the use of gas in industry. He will maintain his headquarters at Witco's Akron, Ohio, office.

Fertilizer Funds Granted

The Foreign Operations Administration has issued an authorization to Yugoslavia to purchase $1,000,000 of nitrogenous fertilizers. Purchases may be made in the United States and possessions, Latin America and European Participating Countries. The procurement number is PA No. 58-230-00-71-5401. The contract period extends until December 31, 1954, and the delivery date until February 28, 1955.

NEW Petrolite R-50

A labor, trouble and money saving package for manufacturers of no-rub polishes.

A blend of Petrolite microcrystalline wax and Petrolite-developed, high melting, phenolic terpene resin.

PETROLITE R-50

ELIMINATES THE BLENDING OPERATION
SIMPLIFIES RAW MATERIAL STORAGE
INSURES AGAINST COLOR DEGRADATION
SIMPLIFIES INVENTORY CONTROL
REDUCES EQUIPMENT REQUIREMENTS
COMPATIBLE WITH NO-RUB POLISH INGREDIENTS
ADAPTABLE TO MANY FORMULATIONS

Petrolite R-50 is a blend of a high-melting, phenolic terpene resin, developed and manufactured by Petrolite, and Petrolite oxidized microcrystalline wax. It provides a light-colored resin blend suitable for use in all emulsion-polish-making equipment. It is convenient to store, easy to handle, readily emulsifiable, conservatively priced.

R-50 is available in 100-pound cartons. Samples, price information and suggested formulation data are available on request.

SPECIFICATIONS

ACID NO.	SAP. NO.	R & B S.P., °F	COLOR, NPA	PEN 100/5
40-50	65-80	190-200	4½ Max	2 Max

Petrolite Waxes are stocked at and available for delivery from Jersey City, New Jersey; Chicago, Illinois; Los Angeles, California and Kilgore, Texas.

PETROLITE CORPORATION
WAX DIVISION
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Management Requirements

Much is being said these days about the need for capable management in business. Conferences have been held with a purpose of dealing with that problem. Courses of study have been arranged in various educational institutions to supplement those to which many enterprises have sent members of their managerial personnel from time to time. Much is being learned on what actually is needed and on how to meet that need.

There is something to be learned from a report recently made by the Organization for European Economic Cooperation on the basis of a study of management functioning in nine western European countries by a group of industrial managers from the United States representing the National Management Council. The findings of the group laid upon the top management studied the blame for the at least alleged "failure" of a large part of European industry to "adapt itself to the economic verities of the mid-twentieth century," even though they do not encompass what many regard as a somewhat common adherence by American business management to beliefs acquired at least a half-century ago, especially in two areas of relations—foreign trade and employment.

Top management everywhere can find something to think about in the NMC group's recommendation that European top management "must acquire a sense of realistic optimism, enthusiasm, and confidence—in itself and its subordinates, and in the future of its enterprises." It might also find a slice or two that fit in the group's list of what the top management studied had failed to do:—

1. Embrace constructive changes.
2. Realize that their primary function is to plan for the future.
3. Avoid concerning themselves too much with day-to-day operations.
4. Delegate responsibility to subordinates or;
5. Give subordinates adequate authority to carry out such responsibilities as were delegated.
6. Pay adequate attention to the efficient use of manpower and to the dignity of the worker.
7. Use well-established and proved methods and technics for the effective selection, training and placement of subordinate managers and foremen.
8. Make adequate use of statistics for control of different operations of the enterprise, notably market surveys.

Those charges, at least by implication, present much support for the opinion long held by capable students of such matters, that the real working job of directing all human activities lies with management echelons below the top brass. It is there that the problem of adequate, capable personnel exists and must be met.

Marketing Is Imperative

Those who do not subscribe to the economic tenet that progress is largely, if not wholly, a matter of production can find much encouragement in an industrial executive's telling a recent session of the Association of National Advertisers that "from now on high productivity becomes the prime responsibility of marketing management and nobody else." Coming on top of his declaration that "our ability to move goods into the hands of customers is today lagging ten to fifteen years behind our ability to produce these goods," that placing of responsibility should make plain the need for development on the distribution side.

The ANA speaker said that it was plain, and that top management fully realizes the value and the necessity of increased investment on that side. The speaker did not say, but every competent observer knows, that there is a need for more than the mere buying of advertising space in the development required to overcome the lag to which the speaker referred. The biggest need is clearly for better, not merely bigger, use of all mediums of marketing.

That need cannot be met fully by way of any of the science or the technology which has contributed to the advancements in production. The approach is physical in but small part. It requires socialogic ability and an overestimation, rather than an underestimation, of the mental capacity of potential buyers.

A lesson in that direction has been given to national advertisers in several lines over the past few years. There is not much evidence that the lesson has been learned—and the trend of aggregate sales has not been encouraging. Much valuable information could be got in such instances by the utilization of real public relations contacts adequately imbued with knowledge of the wisdom of looking, listening, and learning—practices which are fundamental in all practical applications of social science.

The distribution side—call it selling, marketing, merchandising, sales-promoting, advertising, or what you will—can be developed up to the level of production progress. Its development calls for at least as much readjustment in policy and practice as was needed to put the production side where it is. A new sort of knowhow must be made available. That is the only way in which business can meet the "responsibility for maintaining national prosperity" which, as the ANA speaker said, "has passed from the production men to marketing management." The latter must be adequately prepared.

There Is Much to Be Done

Businessmen who, at least now and then—the practice is not at all common—indulge in a bit of self-analysis would do well to look into what they did in the way of participation in the recent American Education Week—and why. There is no matter of human affairs, not even business, which needs the serious and vigorous attention of businessmen more than does education. President Eisenhower covered but a part of the underlying reason for that need when, in asking every citizen of the United States to become better acquainted with the country's schools, he said:—"Because our schools help to shape the mind and character of our youth, the strength or weakness of our educational system today will go far to determine the strength or weakness of our national wisdom and our national morality tomorrow." His most thought-promoting statement in the invitation was that the quality of the nation's schools "depends on all of us." On all of us depends also what the New Jersey Commissioner of Education recently urged upon members of district school boards: that they look to the quality of teachers, the content of the instructional program, and their relations with the public. Those relations require and should get far more consideration and cultivation from both sides than they get today.

The need for general acceptance of responsibilities in respect of educational problems has been recognized by the federal administration far beyond the purview of the newly-created department with an educational function. Plans have been laid on a statutory basis for work in that direction. A national advisory committee on educational problems has at least been blueprinted, with an objective far broader than the commonly discussed matter of financing educational needs.

In connection with that planning, President Eisenhower has asked that each state hold education conferences to deal with the really serious problems of both quality and quantity in all areas of public education. Businessmen have been urged by the Chamber of Commerce of the United States to participate in the arranging and holding of such conferences to the full extent of the purposes of the new public law under which they are authorized. The plan calls for complementing of the state conferences with a national one sometime next year.

The United States Office of Education has set forth five major problems which should be taken up in the conferences:—(1) Providing education to meet all relevant needs; (2) enlisting and maintaining an adequate supply of competent teachers; (3) providing buildings and other facilities; (4) financing; (5) organization. On every one of those problems there are wide differences of opinion among educators at all levels. In all too many instances, the attitude of boards of education seems to be devoid of opinion. That presents the big problem in connection with the widely held business view that the financing and the directing of schools should be handled locally.

Whatever any businessman did in connection with education week, he—and all his fellows—should go into the conference proposal with a purpose of doing whatever needs to be done. Nobody else can do as much.

Washington Talks It Over

By Ralph L. Cherry
Chief, OPD Washington Bureau

The government is taking steps to curb the amount of unclassified strategic data that is going out of the country and falling into the hands of our potential enemies. It has just set up an Office of Strategic Information in the Department of Commerce to work with business and industry on means of shutting down the flow of such information. The control program is to operate on a voluntary basis.

Indicative of the concern which the government has over the situation is the fact that the office was set up by Secretary of Commerce Weeks on direct orders from the White House. The National Security Council instigated the White House directive after surveying the field and pointing out the potential danger to national security. Karl Honaman, on loan from the Bell Telephone Laboratories in New York, has been named director of the office to work with industry people, publishers and federal agency officials in developing the new operation.

During World War II the Department of Commerce served as a point of contest between industry and publishers and the government in the censoring of scientific information of strategic importance to the war. This function ended when censorship was lifted after the war, but when the Korean crisis arose in 1950, the department again offered its services to industry and publishers in a voluntary move to minimize the amount of strategic information available to the Reds.

Secretary Weeks explained that the new move is an effort to revitalize the voluntary system of carefully evaluating the export of scientific, engineering and other information of a non-statistical nature which, while unclassified, might nonetheless be prejudical to our national security if it fell into unfriendly hands. He said that censorship is not intended, but rather the exercise of intelligent, reasonable precautions to make sure that in the necessary free exchange of scientific information we do not provide nations whose interests are inimical to our own with material which they could some day use against us.

Radioactive Materials Uses

Atomic Energy Commission Chairman Lewis L. Strauss had a message for the chemical industry, as well as the food industry, in his speech recently to the New England Council at Boston. It was this:—The chemical industry would do well to start thinking of making use of radioactive materials directly in chemical processing.

A most promising field of application of gamma radiation exists in the initiation and promotion of chemical reactions, he said, and cited the value of this kind of radiation in connection with the manufacture of benzene hexachloride. This product is presently made by using ultraviolet light as the catalyst. Since ultraviolet light does not penetrate deeply, an elaborate mixing equipment is required. But, Mr. Strauss pointed out, the same results have been obtained by simply passing chlorine through benzene in the presence of gamma rays at room temperature and at atmospheric pressure.

And where will the industry be able to get these useful sources of energy? Mr. Strauss also had the ready answer to that question. High intensity gamma radiation exists in the waste material of the reactors which produce energy from nuclear fuels. The Brookhaven National Laboratory has developed—to the pilot plant stage—a system of fixing or immobilizing these radioactive materials as useful sources of energy is becoming available.

Congress and Expiring Taxes

The emergency increases in excise taxes which congress wrote into law in 1950 to help finance the defense program are due to expire April 1 along with the 5 percent increase in the corporate income tax rate which was enacted at the same time for the same purpose. The big question in Washington now is:—What is congress going to do about these taxes now that the Democrats are in control?

Neither Rep. Jere Cooper of Tennessee, the prospective new chairman of the house ways and means committee, where all tax legislation must originate, nor Sen. Harry Flood Byrd of Virginia, who will head the senate finance committee, are commenting publicly on their plans for the next session. But that doesn't stop the speculation which tends in this direction:—

1. The excise tax increases will be allowed to expire as scheduled. 2. The 5 percent corporate income tax increase will be the vehicle for a bitter wrangle between the Democrats and the Republicans. The latter will fight to have this tax increase expire also, but the Democrats will try to have the corporation tax increased another 3 percent to a level of 55 percent so as to offset the revenue loss that will result from raising the personal income tax exemption $100, which they hope to accomplish. Nobody is speculating, however, on what the outcome will be.

FTC May Ease Oleo Curbs

Indications are apparent that the Federal Trade Commission may be ready to remove some of the restrictions that have been imposed on the oleomargarine manufacturers in advertising their product to prevent the public being confused as to its true identity.

Until the present time, it has been the general rule that no mention could be made of any dairy product like cream, or milk, or butter, in connection with oleomargarine advertising — no matter how prominent or conspicuous might be the statement that the product being advertised is oleo and not butter. Two trial examiners of the FTC have just decided, however, that the rule is too strict.

The point of their opinions is that oleomargarine today contains dry milk or cream as ingredients of manufacture. And, therefore, for any advertising matter to be truthful in reciting the ingredients of the product it is lawful to advertise the fact that the product contains milk or cream. It is the examiners' viewpoint that the law only makes it unlawful to advertise oleomargarine in a manner that suggests that it is a dairy product.

If the decisions of the two examiners stand the oleo manufacturers will be given considerably more freedom in the advertising of their product.

Heavy Chemicals

It was generally agreed among producers last week that the tenor of the market had shown improvement, particularly among such bellwethers as soda ash and caustic soda. The market appeared to most sources to be reacting quite favorably to increased consuming demand concurrent with the fall production season. Light soda ash moved out well to consuming industries. Consumption of caustic by the textile industry in the manufacture of high tenacity rayon reflected directly back to stepped up production of rayon cord tires by the rubber industry in conjunction with increased intake of both raw materials and finished products by the revived automotive industry.

As verification of satisfaction with things as they are, producers continued to come through with extensions of contract tenders at unchanged prices until well in 1955. One such instance last week was the announcement of continuance of present prices of borax, boric acid, and boron compounds by one producer.

The acid picture showed little or no appreciable change over the week. Some sources painted a gloomy picture of long supply for muriatic acid, while others reported a more favorable balance. There appeared to be a pickup nearly all through the end use pattern of sulfuric. Calcium chloride demand was seasonally good, as consumers made purchases to cover needs in the ice control field. Producers of copper sulfate noted a general increase in consumption. Liquid caustic potash sold well, while demand for solid was slow.

Nonferrous metals were without much feature last week, as prices generally held through the period. Tin began weakly, but strengthened through the week due to reports of good export demand. Mercury was lacking in strength, but prices remained fairly stable. Copper supplies were in close balance with demand. Nickel and selenium continued largely under government allocation.

The American Pulp and Paper Association reported paper production at 94.8 percent of theoretical capacity for the week ended November 13, compared with the revised figure of 93.1 percent for the previous week, and 96.5 percent for the corresponding week of last year.

Acid, Boric—A producer recently announced the tender of 1955 contracts for boric acid at unchanged prices. Current carlot price for technical 99½ percent material in bags is $124.25 per ton; granular is priced at $99.25 per ton, bags, carlots, works and powdered, $104.25 per ton, same basis.

Acid, Hydrochloric—Current buying interest held up fairly well, but most sources felt that supplies were under no pressure. Some observers reported that captive use had been on the increase in recent weeks due to generally improved consumption. Prices of long standing held without change, although it was said that there were some instances of competitive conditions.

Acid, Nitric—Current prices were expected to hold unchanged. It was apparent to producers that the present picture would remain steady for some time. Buying interest continued well sustained, as consumers steadily withdrew lots on a contract basis. Present production and stocks appeared to be in good balance with demand.

Acid, Sulfuric—There was little or no change in the market position from the previous report. Prices held steady and unrevised with supplies generally available for immediate delivery. Improvement in consuming interest was said to be gradual, but it appeared to most producers that the pickup was general, and spread over the entirety of the end use pattern.

Ammonium Bicarbonate—Demand was said to have improved over the past few weeks. The baking industry displayed good call for material in sizable amounts. Domestic continued unchanged, listed at $6.50 per hundred pounds, drums, carlots, works, and $7.50 per hundred pounds, less carlots, same basis.

Ammonium Chloride — Business was about average for the time of year. There was little change in the general market situation from earlier reports. Technical white granular chloride continued unchanged at $5.25 per hundred pounds, bags, carlots, works, and $7 per hundred pounds, less carlots, same basis.

Borax — One producer recently announced that present contract prices for borax and the various boron chemicals would be extended into 1955. Current buying interest was said to be active, with the glass industry coming in for substantial amounts.

Calcium Chloride—Buying inquiry remained active during the week, as consumers bought ahead in order to cover needs for de-icing purposes on streets and highways. Flake remained priced at $27 per ton, paper bags, carlots, works for 77-80 percent material. All other types as well remained steady and without change.

Calcium Hypochlorite—Buying interest was slack in accord with the off-season period. Prices were steady and unaltered.

Chlorine — Some industries reported that captive use had picked up a bit, thus taking up the slack where long inventories existed. Constant and steady demand from the pulp and paper industry was also encouraging to manufacturers. Insecticide use was seasonally off, with demand from that quarter listless. Consumption of chlorine in the manufacture of ethylene glycol was also off, as producers had bought earlier to cover anticipated antifreeze consumers' needs during the fall and winter season. Material was quotably unchanged.

Cobalt Chemicals—There was little in the way of change in this market last week. In general, consumer activity was fairly good, with many instances of ordering small lots for prompt delivery. Prices were unchanged, reflecting in part the current stability of the cobalt metal market.

Copper Sulfate—Industrial demand was said to be on the upswing during the past few weeks. Producers felt that this was due to the general fall upturn in business activity. Prices were stable and unchanged last week.

Magnesia, Calcined—Current prices for calcined magnesia were 29¼c. per pound, bags or cartons, carlots, freight equalized, 29¾c. per pound, truckloads, same basis, and 30c. per pound, less carlots or truckloads, same basis for technical light and extra light synthetic rubber grade. Chemical heavy grade was offered at 25¼c. per pound, bags or cartons, carlots, freight equalized, 25¾c. per pound, truckloads, same basis, and 26c. per pound, less carlots of truckloads, same basis. Light was offered at the same prices as heavy.

Potash, Caustic—While solid was said to be subject to generally sluggish demand, liquid caustic moved out briskly, particularly to improved demand from the soapmaking industry. It was felt that the current stability of prices had had some effect on consumers, encouraging them to buy ahead. There was plenty of material around to fill the needs of buyers, but consensus was that supplies were not overlong.

Potassium Carbonate—There was no appreciable change in market position. Prices held steady and without change, while demand was described as fair to average, depending on supplier. Consumers had no trouble in getting what they needed.

Soda Ash—Movements of light ash to consumers continued to hold at a good rate, while dense consumption was fairly dull. Generally, it was felt that business patterns, although not as good as last year's, had shown satisfactory improvement during the forepart of the fourth quarter, due to increased activity among consuming industries. Shipments of dense ash to glass plants were described as seasonal.

The supply position was comfortable, according to most sources, and leaning toward a favorable balance. Withdrawals on contracts were made without delay, as consumers could promptly obtain what they needed. Contract quotations contin-

Price Trends

Advanced
Tin, 1c. per lb.

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
98.29	98.29	98.54	98.25

(For Current Prices see page 9)

For Late Market Developments, See Page 4

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ued without change, and were expected to last at least for the rest of 1954.

Soda, Caustic—The weak position encountered last summer and during the early fall by manufacturers seemed to have improved considerably by last week, due in part to better demand from the textile industry. It was pointed out that due to rubber strikes and various labor difficulties during the late summer, demand for high tenacity rayon for use in tire casings was seriously curtailed. This problem reflected back through the rayon industry to consumption of caustic. However, with the current good tone of business in the rubber and automotive industries, consumption by textile manufacturers appeared to have improved considerably. There were some indications in the trade that stocks might be on the tight side in some areas, due to recently improved consuming interest combined with lower chlorine production. However, it was felt that the situation was by no means tight.

Sodium Nitrite—The market was generally without feature last week, as prices held at previously established levels. Although not overly active, demand remained steady and fairly satisfactory to most sources. Supplies were on hand to furnish consumers with what they needed.

Sodium Silicates—Manufacturers reported that they were pleased with the present volume of business for most silicates. It was pointed out that materials for use in petroleum refining as catalysts had experienced a steady and strong demand all through the year. Consumption for use in the manufacture of synthetic detergents also held to good levels. One source indicated that use of sodium silicates in the corrugated box industry as adhesives had kept to a brisk pace, and that substantial volumes of material were moving toward that end use.

Supplies were ample for current needs, and producers did not anticipate any difficulties for the near future. Prices of long standing held steady and without revision.

Sulfur — According to the Bureau of Mines, the domestic sulfur industry produced 439,244 long tons of native sulfur and 27,200 tons of recovered sulfur, of a purity of 97 percent or greater during September. Producers' stocks at the end of September were 3,229,407 tons. Production of native sulfur by the Frasch process in September was 439,244 long tons, as compared with 462,098 long tons for August, and 415,641 long tons for September, 1953. Recovered sulfur of a purity of 97 percent or greater was produced at a figure of 27,200 long tons in September, as compared with 30,700 long tons in August, and 24,500 long tons in September, 1953. Apparent sales of native sulfur in September totaled 394,142 long tons, and of recovered sulfur, 35,524 long tons.

Tin Chemicals—The tin market was low early in the week, but regained losses until metal was returned to former schedules. Potassium stannate remained at 67.4c. to 74c. per pound; sodium stannate, 53.9c. to 59.3c.; stannic chloride, 75.2c. to 76.2c.; oxide, 95c. to 96c.; anhydrous stannous chloride, 80½c. to $1.074; hydrous crystals, 84c. to 88c. and sulfate, 92.4c. to 94.4c. per pound.

Nonferrous Metals

Aluminum—Established contract prices held without change at 22.2c. per pound, 99 percent ingots, 10,000-pound lots, freight allowed, and 20½c. per pound, pigs, same basis. Consuming demand was judged fairly good, with producers able to move stocks without much delay.

Antimony—Domestic antimony metal continued unchanged at 28½c. per pound, bulk, carlots, mines, and 29c. per pound, cases, same basis. Inquiry was fair.

Cadmium—Cadmium metal remained steady and in good supply at $1.70 per pound, ingots or sticks, delivered. Demand for alloys, plating and chemical use was about unchanged.

Cobalt—Metal of 97 to 99 percent purity remained at the unrevised schedule of $2.60 per pound, 100-pound lots, ex warehouse, with $2.67 asked for less than 100-pound quantities.

Copper—The domestic market picture appeared to be one of closely balanced supply, and it was expected that the currently close situation would prevail beyond the beginning of next year. Prices continue firm and unchanged. The London market showed strength in the face of bearish production reports. Scrap held firm with offerings on the light side.

Deliveries of copper to fabricators in October amounted to 97,552 tons as compared with 89,198 tons in September. Domestic refined production for the first ten months of 1954 amounted to 1,056,864 tons. Primary crude production in October amounted to 68,521 tons, a sharp increase over the 61,827 tons reported for September. Refined production was also up

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sharply, at 92,258 tons for October, as compared with 87,874 tons for September. Refined stocks dropped to 32,515 tons in October, a decrease of 15,151 tons under stocks reported in September.

Lead—Reaction to cumulative increases was still apparent as consumers bought only small quantities for immediate needs. Pig lead remained quiet and unchanged at 14.8c per pound, St. Louis basis, and 15c per pound, New York. Export demand was said to be looking up, with improved activity over the past few weeks.

Mercury—Buyer resistance continued to have an adverse effect on pricing last week. Owing to high prices, consumers held out of the market, resulting in sharply curtailed trading. Prices remained at $320 to $325 per flask, depending on quantity.

Nickel—Government stockpiling policies continued to keep this metal and its salts in extremely tight supply. Scarcity of stocks was noticed in the plating industry in paricular, where consumers were hard-pressed to extend existing inventories. Prices held firm and unchanged.

Selenium—Government influence could also be felt in this market, as quotas for use in electronics equipment took the major share of the existing supply. Producers of some cadmium pigments reported that they were able to ship sulfoselenides, but with a delay in some instances. Material for other end use in civilian consumer industries was also scarce. Quotations were stable.

Tin — Improved trading featured the New York market last week, with Straits tin quoted on spot at 91c. per pound. The futures market showed greater strength than previously. A tender by the Argentine government reportedly for 500 tons of straits for January shipment was one of the contributing factors to early strength.

The Bureau of Mines reports that domestic consumption of tin decreased 4 percent in September. The quantity of tin used in September amounted to 6,700 long tons, of which 4,600 were primary and 1,980 of secondary, and 120 in imported tin base alloys. In August, some 7,000 long tons were consumed, of which 4,800 were primary, 2,210 of secondary, and 90 in imported tin base alloys. Tin stocks held by the government and industry amounted to 42,300 tons September 30. Industrial stocks of pig tin decreased 900 tons to 11,700 tons at the end of the month.

Zinc—The market was generally quiet, with prime western unchanged and steady at 11½c. per pound, East St. Louis, and 12c., New York, delivered. Trading was generally fair, with some sources reporting a good movement of prime western slab, and others moving high grades.

Sun Chemical Corp. Elects Brattstrom a Vice-President

C. A. Brattstrom, chairman of the news ink, foreign and supply group of Sun Chemical Corporation, Long Island City, N. Y., has been named vice-president of the corporation, its divisions and subsidiaries.

Mr. Brattstrom joined Sun in 1934, then known as General Printing Ink Company, as a salesman with its Geo. H. Morrill Division. In 1940, he was appointed Morrill's St. Louis, Mo., branch manager and subsequently became responsible for all Morrill's midwest operations. In 1953, he was named chairman of Sun news inks, foreign and supply group with headquarters in New York. He continues his supervision of the over-all operations of General Printing Ink Corporation of Canada, George H. Morrill Company, Rutherford Machinery Company, Sun Supply Company, and Fuchs & Lang de Mexico, S. A.

Steel Drum Values Cited At Barrel Ass'n Meeting

"The reconditioning industry can now supply reconditioned steel drums tailor-made to individual user specifications at prices very much lower than a new container," Morris Hershson declared last week at the annual convention of the National Barrel and Drum Association in New York. Mr. Hershson, New York attorney and head of the U.S. Barrel & Drum Corporation, New York, was re-elected president of the association for the seventh consecutive term.

Carlisle Appoints Bessette

Wayne E. Bessette is the new sales representative for Carlisle Chemical Works, Inc., Reading, Ohio, and will now cover New Jersey, and parts of New York and Pennsylvania. Mr. Wayne was formerly with the chemical division of Armour & Co. Don H. Hattersley, who represented Carlisle in New Jersey, now takes over a midwestern territory which is covered out of the home office.

Liquid Oxygen Plant Opened By Airco at Riverton, N. J.

Air Reduction Sales Company, a division of Air Reduction Company, New York, has officially opened its liquid oxygen plant in Riverton, N. J. The main production building houses two producing columns, each capable of turning out fifty-five tons of liquid oxygen a day and with a monthly capacity of about 75,000,000 cubic feet, the company stated. Full-scale production at Riverton coincides with the closing down of Airco's first and oldest oxygen plant in Philadelphia, after thirty-eight years of operation.

Washburn Grants License

T. F. Washburn Company, Chicago, has signed a licensing agreement with American-Marietta Company, Chicago, licensing the latter to manufacture polyamide modified thixotropic vehicles for American-Marietta's own paints under Washburn's patent number 2,663,649.

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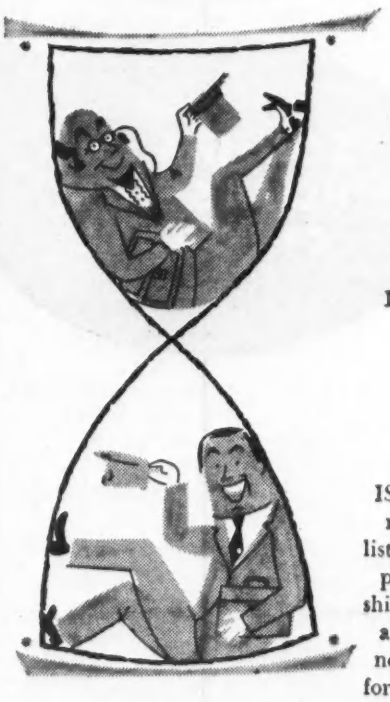

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Chemicals Use in Auto Field Mapped by CMRA

—Continued from page 5

the fabric could pass for a shantung. And all of our colors, blues, greens, tans and grays, faded out to a very pretty, but undesirable orchid shade. We went all out to get rid of those bugs.

"The fiber manufacturer pitched in with all of his know-how. Dyestuff makers helped tremendously with new dispersed dyes and an entire new color line of neutral dyeing premetallized colors. It was touch and go for two or three years, but it is pretty well behind us now and we are obtaining rather excellent results."

While nylon has earned "a very enviable" position among synthetic fibers in the automotive upholstery field, Mr. Grajeck contended that the industry is by no means ready to stand pat on the present product. "Neither has the chemical industry as evidenced by all the activity in polymer research," he added. Besides synthetic fibers, he said, there are other outlets for chemicals in automotive upholstery.

Outlook for Polymeric Materials

"Polymeric materials are potential finishes for upholstery fabrics to impart to these fabrics such functional properties as abrasion resistance, soil resistance, waterproofness and ravel or fray resistance," it was noted. "The organo-silicon polymers can well be included in this connection. The potential is there for similar materials to provide dimensional stability and fray or ravel resistance whether they are applied to back sizing or immersion technics, from latices or plastisols.

"That there is volume business in this field is obvious," he emphasized. "Assuming that there will be a minimum of 5,000,000 automobiles produced this year and that only six yards of upholstery fabric is used in each automobile, we arrive at a figure of 30,000,000 yards per year. Since upholstery fabrics weigh a minimum of one pound per yard, this is equal to at least 30,000,000 pounds a year on which the synthetic fiber manufacturer can set his production sights."

Use of plastics in automobiles was termed "fairly static" by J. K. Totten of Ford's manufacturing department. While consumption of plastics may show a year-to-year rise, he attributed this to a trend to larger parts—larger lenses, larger arm rest bases and use of more knobs.

Plastics in Auto Structure

"Of interest to engineer, management and laymen," Mr. Totten continued, "is the potential that may lie in reinforced plastics for structural members in the automobile. The glass reinforced plastics appear to have the characteristics of a desirable material for auto bodies.

"However, processing technics are still rather primitive, material cost is high and direct labor to produce the parts is relatively great. For low production—25,000 units or less—there may be an apparent advantage in using reinforced plastics. Above that number, the advantage dissipates very rapidly. Moreover, customer acceptance of the idea of plastic bodies is yet to be determined."

He saw a "tremendous potential" for increased use of plastics as interior trim in automobile bodies. However, it was pointed out that the initiative to step up the use of plastics must come from outside the automobile industry. "Customer demands; new materials at lower cost; better machinery for molding, forming or fabricating the material are the keys to the greater market for plastics in automobiles," he said.

Chemicals Used in Molded Parts

The average automobile uses about four pounds of thermoplastics and about three-quarter pound of thermosettings, it was noted. In terms of basic chemicals, Mr. Totten estimated the gross poundage to supply the automotive industry with molded parts at about 28,340,000 pounds. A breakdown of some of the major chemicals used in this connection follows in pounds:—

Cresols, melamines	850,000
Aldehydes	850,000
Acid anhydrides	4,000,000
Vinyl alcohol	2,500,000
Cellulose	4,000,000
Phthalates, glycols, adipates, alcohols, sebacics, polyesters, etc	800,000
Coloring agents	160,000
Fillers, woodflour, asbestos, clay, etc	1,350,000
Acrylic acid	7,200,000

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Amino acids	4,000,000
Miscellaneous chemicals	2,500,000

Talking on lubricant additives and synthetic lubes, E. F. H. Pennekamp of Enjay Laboratories Division, Standard Oil Development Company, pointed out that the sharp rise in the use of additive oils in the last five years has brought about a 250 percent increase in the dollar market value—from about $39,000,000 in 1948 to $108,000,000 last year.

Average Additive Investment

"The average additive investment per gallon of oil treated," he went on, "has more than doubled in this period, going from about 5 cents to about 11 cents per gallon. It is also interesting that while the general price index in this five-year period has increased about 16 percent the additive cost in treating an oil to a given performance level has decreased by 20 percent.

"This reflects the very competitive nature of the industry, improvements in product potency, and the accepted practice in the chemical and petroleum industries of passing along to the customer benefits from the savings which result from improved processes and increased market volume."

Breaking down the 1953 market by additive types, Mr. Pennekamp said, "Detergents and inhibitors by far outweigh all other types of chemicals used and account for about 66 percent of the market. Viscosity index improvers and pour depressants represent another 16 percent. Extreme pressure additives and miscellaneous additive materials account for the rest. Based on average active ingredient concentration, the chemical content of these products has been estimated in our calculations at more than 250,000,000 pounds."

On the assumption that the overall manufacturing yield of chemicals in the additive business is about 65 percent, Mr. Pennekamp estimated that about 400,000,000 pounds of chemicals were used in 1953 to make lubricating oil additives.

As to the future, he said, "Since the multi-range service station oils are becoming increasingly popular, this single factor will cause a significant increase in the use of viscosity index improvers and some additional increase in use of detergents and inhibitors. We also know that most of the growth in the market over the last five years was due to the big increase in use of detergent and inhibitor type additives. The rate of increase in volume of this type of additive is definitely tapering off. Despite the possible increase in use of viscosity index improvers, the potential growth will probably never be what it was from 1948-1953."

In closing, the speaker made some passing comments on synthetic lubricants. "While some of these products have been marketed in limited areas for automotive equipment," he asserted, "they have all suffered from one serious limitation, namely, high cost. They can be justified only in an application where normal petroleum base mineral oils fortified with additives simply cannot be used.

"Thus far the additive oils, for example, the latest type multi-range motor oils, have filled the needs of automotive equipment. Of course, it must be recognized that the use of chemicals in a concentration as high as 10 percent in the latest motor oils may merely be one step in the general direction of synthetic oils."

In a talk on fuel additives, R. K. Scales, general manager of Ethyl Corporation's Detroit research laboratories, reported that tetraethyl lead, used as an additive in both automotive and aviation gasoline, has an indicated consumption of between 400,000,000 and 450,000,000 pounds annually, with a dollar value of around $250,000,000.

Consumption of Gasoline Oxidants

Annual consumption of gasoline oxidants—amino phenols, alkylated phenols and alkylated phenylenediamines—was put at about 6,000,000 pounds, with a value of $7,000,000. Yearly use of rust inhibitors, such as ammonium sulfonates and organic phosphorous compounds, runs about 5,000,000 pounds, with a value of $1,000,000, the speaker said.

He also pointed out that a copper chelating agent used has a dollar value of several millions. Deposit modifiers aimed at cutting down surface ignition and spark plug fouling, he went on, are now showing an annual consumption of about 8,000,000 pounds, with a value of $3,000,000.

An alcohol additive which prevents carburetor icing was said to have an annual consumption of about 83,000,000 gallons, with a value of about $27,000,000. Annual consumption of upper cylinder lubes, employed as additives to help valve and upper cylinder lubrication, was estimated at around 20,000,000 gallons, with a value of $5,000,000.

James T. O'Reilly of Ford's manufacturing research department, speaking on mechanical goods and seals, saw the future this way:—"Increased emphasis on color, comfort and safety will probably characterize the future automobile. When color can be incorporated in rubber or plastic components there can be a definite advantage over metal which has to be painted, and frequently upholstered at considerable cost.

"From a manufacturing standpoint more expensive materials can be justified if they permit consolidation with fewer parts and less assembly labor. The success of silicones and nylon moldings shows that high price is not an insurmountable hurdle. There will be undoubtedly many surprises—for example, the rather abrupt switch to tubeless tires as standard equipment which most of us would not have foreseen a couple of years ago."

Chemical Industry Lauded

The chemical industry deserves a good share of the credit for helping to make America's 1955-model passenger cars the most attractive and colorful in automotive history, A vanderZee, vice-president of Chrysler Corporation, told CMRA.

Mr. vanderZee cited the improvements made in automotive finishes in recent years, and the development of new man-made fibers for automobile upholstery as two of the chemical industry's most important contributions to improved dura-

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bility and eye appeal in passenger cars.

Introduction of new cadmium and titanium-pigment enamels has permitted car stylists to select color schemes from the entire range of the spectrum, Mr. vanderZee said. Many of the tested-and-approved pastel shades now being shown were considered "impossible" from a durability standpoint as recently as three years ago, he added.

Besides giving car buyers an infinitely wider range of colors to select from, research in the chemical and paint industries has provided finishes which last up to ten times longer than those of thirty years ago, Mr. vanderZee said.

CMRA's memorial award for the best paper delivered before the association during 1953-54 was presented to Dr. William C. Gardiner of Olin Mathieson Chemical Corporation by George Russell of American Cyanamid Company.

Chemical Industry Seen

—*Continued from page 5*

states. All geographical areas were represented, with the south and southwest showing the greatest expansion. Texas, fourth chemical manufacturing state, led the way in new chemical construction with seventy-two projects costing an estimated $571,400,000 slated or completed. Florida, a comparatively recent arrival in major chemical manufacturing, was second with seventeen projects valued at an estimated $235,600,000.

The three west coast states continued to grow as chemical centers, the survey showed, with fifty-one construction projects valued at an estimated $200,500,000 reported. California led with thirty-seven projects totaling $173,600,000.

Among the traditional leaders in chemical manufacture, Illinois ranked third nationally, adding thirty-five projects valued at an estimated $169,600,000, New Jersey and New York, historically ranked first and second, respectively, also added to their chemical facilities. New Jersey showed an addition of an estimated $68,100,000 involving thirty projects, while New York's thirty-three projects planned, under construction and completed represent an estimated value of $66,700,000.

Classification by Category

Consolidation of completed, under construction or planned figures shows that in this period the industry is making its heaviest investment, $657,000,000 in a wide, general group of chemicals. The second largest investment, $616,000,000 is in the field of polymeric materials, chiefly for plastics. The third largest, $595,000,000, is for agricultural chemicals, mostly for fertilizers.

The fourth largest, $467,000,000, is for synthetic organic materials. The industry is spending an estimated $154,000,000 for chemical production of metals and alloys, such as magnesium, titanium or zirconium. More than $57,000,000 is being spent for new research facilities. Other projects total $185,000,000.

The MCA survey differs from government and other statistics in two important respects, and, therefore, says MCA, cannot be accurately related to these figures. First, instead of calculating money spent on construction in any given period, it classifies projects by those completed, now under construction, or definitely planned.

Second, unlike government statistics, which are classified according to the main product lines of corporations, the MCA survey includes chemical facilities regardless of the main business of the builder. Therefore, it takes into account the large chemical investments being made by the rubber, petroleum, steel, pulp and paper, and other types of companies. MCA is planning to carry out its new type of survey on a year-to-year basis.

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Agricultural Chemicals

Current trade was highlighted by increased activity in the export market as invitations to bid against the $14,500,000 procurement authorization granted Korea by the Foreign Operations Administration were issued by the Office of Procurement of the Republic of Korea. The deadline on bids has been placed at November 26 for nitrogenous fertilizers and November 29 for potassium and phosphate fertilizers.

Inorganic plant foods showed no signs of price activity last week, as schedules held steady in the face of fairly good demand in the off season. Stockfeed business showed steady activity. Organic fertilizers were subject to varying business conditions. Offerings of bonemeal were limited, and there were no offerings of castor pomace. Both markets were strong with the latter nominal. Buying interest sagged for dried blood and tankage, with the market generally weak.

According to the Bureau of Mines, sales of agricultural lime in July were 5,032 tons below June levels, while total open-market lime sales were off 4,878 tons for the same period.

Activity in pesticides was slow in accord with the off season in this country. Demand for weed killers was practically nil. The export picture looked fairly good, however, as countries below the equator showed good seasonal interest. Peru and Venezuela were said to be in the market for finished formulations, while small lot business was noted for other export to the Middle East and European countries.

Fertilizer Materials

Ammonia, Anhydrous—Consumption for industrial end uses kept demand going at a fairly good rate. Prices continued unchanged for fertilizer ammonia at $85 per ton, works, and $88 per ton, freight equalized.

Ammonium Nitrate — Producers continued to build stocks in preparation for spring demand. A limitation of 7,560 metric tons of ammonium nitrate, calcium-ammonium nitrate, and ammonium nitrate sulfate has been placed for Korean shipment.

Ammonium Sulfate — Buying interest continued fairly steady for the time of year. There were some reports of buying ahead due to the stability of contract prices. Although some definite limitations were placed on nitrogenous, phosphatic and potassium fertilizers against the FOA procurement authorization for Korea, it was apparent that ammonium sulfate awards would be made on the basis of available funds.

Bonemeal—The market remained strong, with offerings limited. Prices remained firm at $68 to $70 per ton, f.o.b. works, for steamed.

Castor Pomace—None was offered, and the market remained entirely nominal at $30 per ton bid.

Cyanamide—Quotations were unrevised. Demand was seasonally off. The limit placed upon export of calcium cyanamide to Korea under the recent FOA authorization is reportedly 30,000 metric tons.

Dried Blood—Demand continued spotty and seasonally dull. There was little demand. Sales at New York remained at $7.50 per unit of ammonia, and Chicago, $7.75, same basis.

Lime—Consumption continued at a figure well under 1953 levels, due to lower government subsidy and widespread drought in some sections.

The Bureau of Mines reports that 16,657 tons of agricultural hydrated and quicklime were sold by producers in the United States in June, while only 11,629 tons were sold in July. Some 12,942 tons were sold in July, 1953. For the cumulative period January-July, 1954, 169,684 tons were sold, as against 160,746 tons in the comparable time for 1953. Total sales of open-market lime decreased slightly from the previous month. In July total sales were 616,779 tons, as compared with 621,657 tons in June.

Manganese Sulfate—The fall peak season was over, and producers turned to replenishing supplies. Material for fertilizer use was quotably without change.

Phosphate Rock — Withdrawals against contract orders continued fairly good. Supplies were believed to be in a fairly good position, although somewhat lengthy. Export inquiry showed little improvement over the period.

Potassium Muriate—The market picture showed improvement as withdrawals on contract came in better volume than previously. Supplies were adequate for current off-season interest, with a tendency on the part of producers to build up surplus in anticipation of improved spring consumer requirements. Prices held steady.

Superphosphate—Prices held steady and without revision. Producers' shipments of normal superphosphate were judged about average for the time of year, with the market generally quiet. Both normal and triple superphosphates were in fairly comfortable supply.

It was reported that among phosphatic materials to be alotted to Korea, a limitation of 10,000 metric tons of triple had been imposed, with quantity purchases of other phosphates to be determined by the limitation of funds.

Tankage—Consuming demand was sluggish. Market was quiet and unchanged at $6.75 per unit of ammonia, New York, and $7.25, Chicago, same basis.

Urea — Domestic buying interest for fertilizer use was seasonally dull. Feed trade and industrial uses continued to keep to satisfactory levels. Prices held steady after the revisions which recently took place, with 46 percent material steady at $110 to $120 per ton, bags, carlots, f.o.b. plant. The deadline for nitrogenous fertilizer bids for Korean shipment under the recent FOA authorization has been placed at November 26. Urea limit has been put at 10,000 metric tons.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
109.65	109.65	110.59	111.34

(For Current Prices see page 9)

*Fertilizer Tag Sales: August**

	Equivalent tons		
	August 1954	July 1954	August 1953
N. Carolina	30,000	9,000	19,000
S. Carolina	11,000	10,000	28,000
Georgia	13,000	39,000	47,000
Florida	48,000	45,000	55,000
Alabama	18,000	14,000	18,000
Tennessee	10,000	23,000	14,000
Arkansas	5,000	6,000	7,000
Louisiana	6,000	7,000	8,000
Texas	13,000	15,000	19,000
Oklahoma	8,000	3,000	13,000
Total	162,000	171,000	228,000

*Information furnished by the National Fertilizer Association.

Los Angeles Market

Los Angeles.—Trading continued at a moderate level during the week with activity following a normal seasonal pattern. Castor pomace remained firm and in light supply. Domestic fish meals witnessed a fair volume of sales with production adequately maintained to meet present requirements. Overall, prices showed little change although blood meal and tankage were weak. Ruling prices were:—

Ammonium phosphate—$80.14 per ton in bags, 16-20 grade, f.o.b. Los Angeles. $107.64 per ton, in bags, 11-48 grade, f.o.b. Los Angeles. Both domestic and Canadian material. $100.24 per ton, 13-39 grade, domestic, in bags, f.o.b. Los Angeles. $110 per ton, 11/51 grade, domestic, in bags, f.o.b. Los Angeles. $4 discount in bulk.

Bone meal—$82 per ton, steamed, domestic, f.o.b. Los Angeles.

Castor pomace—$40 per ton, f.o.b. Los Angeles.

Tankage — wet rendered, fertilizer grades, $4.75-$5 per unit of ammonia, f.o.b. producing plant.

Pesticides

Calcium Cyanide—Current demand was low, as was expected by producers for the November-December period. Inquiry for household use in rat and ant control was fairly static at this time of year. Grain fumigant inquiry was practically nil, due to the passing of the storage season. Prices were unchanged.

Lindane—As this material is largely used in garden sprays and the like, there is little current buying interest in this country. Prices held unchanged.

Parathion—Current price for technical material was unchanged at $1.62 to $1.64 per pound. However, there were reports that price changes were in the mill, and that new prices would be forthcoming.

Toxaphene — Prices of long standing held without change, at 19c. per pound, drums, carlots or truckloads, works; 22c. per pound, ton lots to truckloads, same basis, and 25c. per pound, smaller lots, same basis. Demand was in accord with the season.

For Late Market Developments, See Page 4

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Petroleum Derivatives

The chief difficulty encountered in the petroleum derivatives market was one of overproduction of certain materials, notably aromatic solvents. Although demand has been quite good for these products, most producers have maintained a higher production rate than they could place in consumers' hands and have built up their supplies of finished material as a result. Industrial demand for toluol has been fairly active, and appeared a bit more stimulated in the past fortnight, but the makers were as yet easily able to take care of their customers' needs. Actual production of petroleum source material could be increased if the market demanded it. Xylol moved well to a good interest on the part of industrial consumers. Supplies were considered comfortable. Sales of partial aromatics held their own, with prices firm and unchanged. Aliphatics moved in sufficient volume to satisfy the producers.

Wax demand continued very active, keeping the market both microcrystalline and paraffin grades quite firm. Supplies were generally able to fill consumers' demands, but there was little if any movement toward building up stocks on the part of the makers. The present closely balanced market was one that would be in evidence for some time to come. Prices were unchanged over the past week. Prices of propane were raised by some suppliers in the New York harbor and Group 3 areas. The increase of ½ cent per gallon brought quotations to 8½ cents and 4 cents, respectively. Shipments of propane and butane moved well to a good demand from areas where heating requirements were being stepped up. Supplies were adequate in most areas as yet and no acute shortage was seen in the making, although material available for shipment was being reduced at a fairly rapid rate.

Solvents and Diluents

Benzol—Market demand was considered on the upswing by some sources in the industry. The remainder of the year should produce a continued steady, although slow, increase in demand and consequent firming in the overall position of this material, it was stated. The rate of increase in steel production was being watched as having a direct bearing on the benzol situation. As yet, the increase has been noticeable but not tremendous by any means. However, if the rate of increase should jump greatly in the coming months, the position of petroleum source material would certainly be affected. As yet, most industry sources expected a gradual firming in the benzol market which could extend well into the coming year.

Cleaners' Naphtha—Sales pushed forward at a steady pace that was generally found to be in keeping with the average for this market over the past months. Producers maintained an adequate output and filled orders without difficulty. The price pattern of this material was undisturbed by changes over the past week.

Hexane—Consuming interest was up to the rate of the past weeks, with very good demand noted from vegetable oil extractors. Material was sold at unchanged quotations, and was generally found in ample supply for both domestic and export requirements. No immediate changes in prices were expected in the industry.

Mineral Spirits—Production was reported to be entirely ample for the present rate of consumption, and was expected to remain so for the foreseeable future.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended November 6 totaled 270,402,000 barrels, according to data reported to the Bureau of Mines. Compared with the total of 272,185,000 barrels for the preceding week, this represents a decrease of 1,783,000 barrels comprising a decrease of 2,348,000 barrels in stocks of domestic crude and an increase of 565,000 barrels in stocks of foreign crude.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
104.75	104.75	104.75	105.35

(For Current Prices see page 9)

The overall consuming position was such that a gradual rise in demand over the months ahead was expected, but present production facilities were sufficient for the demands to be put on them and would not be strained, it was believed. Earlier price schedules were maintained over the past week.

Toluol—Industrial demand was maintained at a good pace over the past week, and appeared to be slightly above that for the thirty days just previous. However, there was no great difficulty in supplying most requirements, it was stated. The export market was considered somewhat on the weak side, with demand currently running behind what some industry observers had noted previously. Government requirements for aviation gasoline and nitration were not sufficient to hurt supplies available for civilian purposes. Prices remained firm as previously quoted.

VM&P Naphtha—Industrial users maintained a good demand over the week just past, it was stated in the industry. The current level of industrial output has been stepped up slightly, but has not as yet strained production capacity for this material. Sales were expected to remain active for at least the balance of the year.

Lighter Fractions

LPG's—Propane prices firmed last week, with quotations from some suppliers going up ½c. per gallon to 8½c. in the New York harbor area. A rise in the Group 3 area price was effected by the same suppliers, making this quotation 4c. per gallon. Shipments of propane and butane moved well because of an increased demand for use in heating needs. The stepup in sales has been generally in line with usual seasonal movements for these materials. Supplies as yet were considered ample, but industry sources stated that material available for shipment was being reduced at a fairly rapid rate.

Waxes

Microcrystalline — Wax demand from the paper industry was reported as quite good and easily up to the levels of the past sixty days. Manufacturers were able to fill most orders without difficulty, but had little if any excess material on their hands. The present closely balanced market was one that would be encountered for some time, it was believed in the industry. Prices remained firm and unchanged.

Paraffin — Crude scale and refined grades were found in very good demand by all in the industry. Export demand, as well, has been quite good, although one source stated that some slight weakness had been encountered in this direction recently. The market was well balanced in regard to supplies and any additional buying activity might well find some difficulty in obtaining material. No price revisions were announced during the week.

Miscellaneous

Crude Oil—The Texas Railroad Commission raised the state's oil allowable for December by 64,374 barrels daily. The quota for next month was set at an average of 2,961,782 barrels daily on the basis of sixteen producing days. This compares with a permissible production of 2,897,408 barrels daily previously.

Los Angeles Petroleum Market

Los Angeles.—The market held steady pricewise during the week with the main interest centered on butane and high melting point paraffin waxes. Demand for solvents and diluents remained at a good level with supplies adequate. Listings were unchanged from previous quotations with lacquer diluents and light paint thinner quoted 20.4c. per gallon, 400 gallons or over, ex-tax, f.o.b. Los Angeles Basin area. Cleaning solvents, including Stoddard, quoted 19.4c. per gallon, same basis.

Stocks of propane were ample with postings at 5.9c. per gallon, tankcar basis, f.o.b. Los Angeles. Butane witnessed heavy demand with supplies limited. Quotations firm at 6.9c. per gallon, tankcars, f.o.b. Los Angeles.

Demand for refined paraffin waxes continued strong from both export and import interests with no excess of supplies reported.

For Late Market Developments, See Page 4

US Lists Coal Chemicals in Line for Duty Cuts

—Continued from page 3

only to file a brief or statement may do so until December 27.

The hearings running simultaneously before the Tariff Commission will be for the purpose of developing the so-called "peril points" for the articles listed. These peril points are the levels below which tariffs should not be reduced in order to avoid injury to American producers. These peril points are reported to the President by the commission. Any testimony submitted to the Tariff Commission will automatically be made available to the repicrocity information committee.

Many Coaltar Products

Most of the items of interest to the chemical industry which have been listed for possible discussion are the coaltar products contained in paragraph 27 of the 1930 tariff act. A good many of these items have not been subject to tariff reduction in any of the previous agreements and presently are dutiable at the rate of 40 percent advalorem plus 7 cents per pound. These rates are based on the American selling price, rather than foreign values.

Some of the items, however, have previously been involved in tariff reductions and are now being submitted again for further tariff cuts. Under the law the President can reduce tariff duties up to a maximum of 50 percent below the rate in existence on January 1, 1945. Also, he is permitted to "bind" a tariff at its present or new rate.

The items listed for possible tariff reduction, which are of interest to the chemical industry, include the following:—

Chemicals, Oils and Paints

Ajinomoto and other monosodium glutamate preparations; acetanilide not suitable for medicinal use; alphanaphthol; aminobenzoic acid; aminonaphthol; aminophenetole; aminophenol; aminosalicylic acid; aminoanthraquinone; aniline oil; aniline salt; anthraquinone, and arsenilic acid.

Benzaldehyde not suitable for medicinal use; benzal chloride; benzanthrone; benzidine; benzidine sulfate; benzoic acid not suitable for medicinal use; benzoquinone; benzoyl chloride; benzyl chloride; benzylethylaniline; beta-naphthol not suitable for medicinal use; bromobenzene; chlorobenzene; chlorophthalic acid; cinnamic acid, and cumidine.

Dehydrothiotoluidine; diaminostilbene; dianisidine; dichlorophthalic acid; dimethyl aniline; dimethylaminophenol; dimethylphenylbenzylammonium hydroxide; dimethylphenylenediamine; dinitrobenzene; dinitrochlorobenzene; dinitronaphthalene; dinitrophenol; dinitrotoluene; dihydroxynaphthalene; diphenylamine; hydroxyphenylarsinic acid; metalinic acid, and methylanthraquinone.

Naphthylamine; naphthylenediamine; nitroaniline; nitroanthraquinone; nitrobenzaldehyde; nitrobenzene; nitronaphthalene; nitrophenol; nitrophenylenediamine; nitrosodimethylaniline; nitrotoluene; nitrotoluylenediamine; phenylenediamine; phenylhydrazine; phenylnaphthylamine; phenylglycine; phenylglycineorthocarboxylic acid; phthalic acid, and phthalimide.

Quinaldine; quinoline; resorcinol not suitable for medicinal use; salicylic acid and its salts not suitable for medicinal use; sulfanilic acid; thiocarbanilide; thiosalicylic acid; tetrachlorophthalic acid; tetramethyldiaminobenzophenone; tetramethyldiaminodiphenylmethane; toluene sulfochloride; toluene sulfonamide; tribromophenol; toluidine; tolidine; tolylenediamine; xylidine; carbazole having a purity of 65 percent or more; all the foregoing products (not including phthalic anhydride, anthracene, or naphthalene) whether obtained, derived, or manufactured from coal tar or other source.

All products (except products chiefly used as assistants in preparing or finishing textiles and except azo salts, fast color bases, fast color salts, and naphthol AS and its derivatives), by whatever name known, which are similar to any of the products provided for a paragraph 27 or 1651, tariff act of 1930, and which are obtained, derived, or manufactured in whole or in part from any of the products provided for in either of said paragraphs.

All mixtures, including solutions, consisting in whole or in part of any of the products provided for in subdivision (1), (2), or (3) of paragraph 27 (a), tariff act of 1930 (except sheep dip and medicinal soaps, and except products chiefly used as assistants in preparing or finishing textiles).

Agar agar; licorice, extracts of, in pastes, rolls, or other forms; camphor, natural (crude and refined) and synthetic; menthol; oils, distilled or essential, not mixed or compounded with or containing alcohol:—sandalwood; safrol, not mixed or compounded, not containing more than 10 percent of alcohol, not marketable as cosmetics, perfumery, or toilet preparations, and not specially provided for.

Pigments, whether dry, mixed, or ground in or mixed with water, oil or solutions other than oil, not specially provided for:—Vandye brown and Cassell earth; barytes ore, crude or unmanufactured, or ground or otherwise manufactured; potato starch; destrine, not otherwise provided for (not including dextrine made from potato starch or potato flour), burnt starch or British gum, destrine substitutes, and soluble or chemically treated starch. Cerium nitrate, cerium fluoride, and other salts of cerium not specially provided for.

Earths, Earthenware and Glassware

Dead burned and grain magnesite, and periclase, not suitable for manufacture in oxychloride cements; pumice stone, wholly or partly manufactured; graphite or plumbago, crude or refined:—amorphous (except artificial).

Metals and Manufactures

Tungsten ore or concentrates; ferromanganese containing 4 percent or more of carbon; titanium.

Free List

Gums and resins:—Kadaya; natural gums, natural gum resins, and natural resins, not specially provided for:—talka; oils, distilled or essential, not mixed or compounded with or containing alcohol:—camphor; santonin, and salts of; spices and spice seed:—cardamom; wax, vegetable, not specially provided for:—Japan.

Trade Briefs

Sun Pipe Line Company, Philadelphia, subsidiary of Sun Oil Company, has announced the resignation of Hill Sanders, vice-president and general manager.

Atlantic Refining Company, Philadelphia, has appointed M. G. Davis and W. R. Holland managers of the eastern Pennsylvania and southern marketing regions, respectively.

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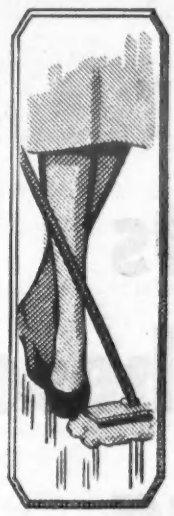

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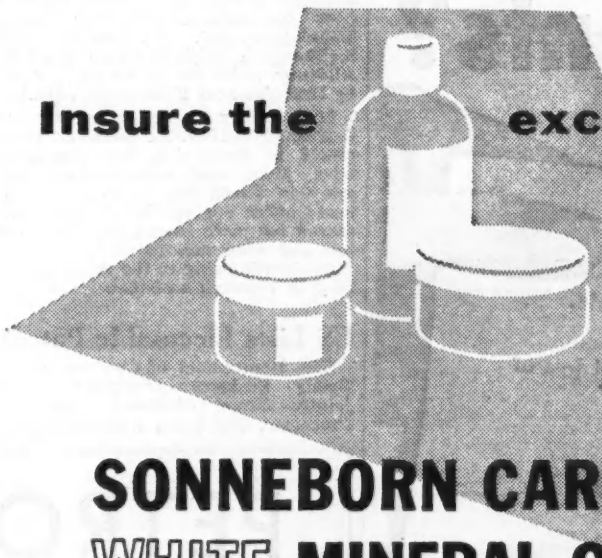

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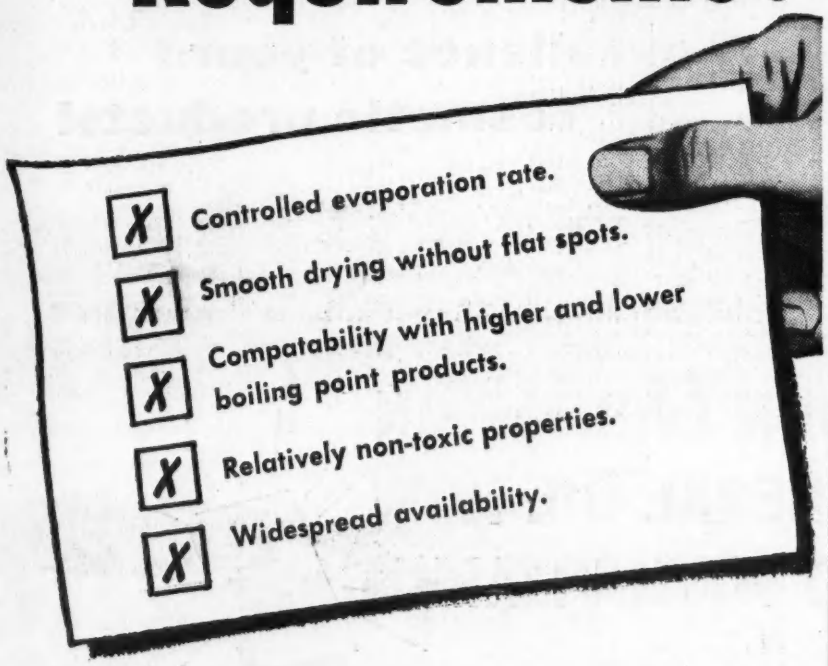
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API Re-Elects Spencer, Porter to Top Positions

P. C. Spencer, president of Sinclair Oil Corporation, New York, was re-elected chairman of the board of directors, and Frank M. Porter, of Fain-Porter Drilling Company, Oklahoma City, Okla., was re-elected president of the American Petroleum Institute at the thirty-fourth annual meeting held recently in Chicago.

B. Brewster Jennings, president of Socony-Vacuum Oil Company, Inc., New York, was re-elected treasurer, and Lacey Walker, of New York, was re-elected secretary. Three new vice-presidents were elected by the board of directors. They are:—Vice-president for marketing, J. G. Jordan, Shell Oil Company, New York; vice-president for refining, E. B. McConnell, Standard Oil Company (Ohio), Cleveland, and vice-president for production, A. W. Thompson, A. W. Thompson, Inc., Houston, Tex. Charles S. Jones, of Richfield Oil Corporation, Los Angeles, has been re-elected API vice-president for transportation.

Hercules Safety Position Goes to Ernest S. Lomax

Ernest S. Lomax has been named an assistant to Charles L. Jones, safety engineer for Hercules Powder Company, Wilmington, Del. Mr. Lomax had been maintenance engineer since 1948 at the Allegany Ballistics Laboratory, operated by Hercules near Cumberland, Md.

Mr. Lomax joined Hercules as a draftsman in 1939. He served at Hercules plants in Brunswick, Ga., and Hattiesburg, Miss., and after serving in the army in World War II returned to the home office engineering department, and served for more than a year in Wilmington and nine months at the Brunswick plant before going to the Allegany laboratory as research assistant.

US Lists Licensable Patents

The Department of Commerce and the Small Business Administration have jointly issued *Chemical Products and Processes*, the latest abstract of government-owned inventions and patents available for license. The new book contains 1,350 abstracts and may be obtained at $3 per copy, postpaid, by ordering direct form the Office of Technical Services, Department of Commerce, room 6227, Washington 25, D. C.

Fertilizer Supplies in Spain Listed by U. S. Government

The Bureau of Foreign Commerce reported last week that available supplies of fertilizers in Spain during the 1954-55 crop year indicate that consumption will amount to 100,000 to 125,000 tons of nitrogen, 250,000 tons of phosphoric oxide, and 75,000 tons of potash.

Spain is self-sufficient in phosphatic and potassium fertilizers but must import approximately 70 percent of the nitrogenous materials. Production of nitrogenous fertilizers during 1953-54 amounted to 42,000 tons, which was nearly double the output of the preceding year. The nitrogenous material produced include ammonium sulfate, ammonium nitrate, ammonium-calcium nitrate, and calcium cyanamide.

Production of superphosphate, the only phosphatic fertilizer made in Spain, totaled 1,318,000 tons, equivalent to 210,000 tons P_2O_5 in 1953-54.

Spain is a prominent exporter of potash. Output in 1953-54 amounted to approximately 185,000 tons K_2O, of which 75 percent was exported. The principal destinations of the potash exports were Japan, Belgium-Luxembourg, the United Kingdom, the United States, the Netherlands, and Italy, in that order.

Chicago PVLA Pays Tribute To Past Presidents at Luncheon

The Chicago Paint, Varnish and Lacquer Association took time from its ordinary activities to pay tribute to its past-presidents at a luncheon in their honor at the Chicago Athletic Club recently.

Fourteen past-presidents and ten of the present officers and members of the executive committee attended the luncheon. Emory S. Rockwell, retired executive of National Lead Company, president of the association in 1912-13, was the oldest president from point of service in attendance.

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Industrial Organic Chemicals

Advances for refined fermentation amyl alcohol, 128°-132°C. and ACS grade were followed last week, eliminating the range created the week before. Clarification of differentials between eastern and western prices indicated that a spread would continue to be carried in four northwestern states.

Prices were generally stable in the market for aliphatic organics. Whatever improvement has been noted in fall business this year has been generally reflected in the market for most materials.

Solvents have been in very good demand for the past few months. The expansion of business has only strengthened that picture. The glycols have held up very well since their price advance in early October. Demand for amines has been steady at a satisfactory pace in most cases, and in some instances much better than had been anticipated. Most sources indicated that the antifreeze business has been relatively good this season. Thus, antifreeze glycol and methanol have been enjoying good demand from this direction.

Glacial acetic acid had shown some signs of recovery earlier. However, part of the gains have sluffed off again. Price weakness was visible once more. Acetone seems to have maintained its price and market position. Demand for the solvent was considered very good. Some improvement from lacquers has bolstered activity for butyl acetate and ethyl acetate. There was ample production to handle the increases. Alcohol was moving well to solvents and for other end-uses.

The methacrylates and the acrylates were enjoying a well sustained demand. Activity was generally felt to be above last year. Price schedules of these materials were firm and unaltered. Dimethylformamide also moved at a steady pace. Ethylene oxide has been holding up well. Price advances early in Otcober have not deterred demand for the oxide or its glycol and amine derivatives. Furfural was in adequate supply to take care of current demand. Demand from most outlets held up rather well. A number of smaller buyers were seen to be taking less as production for the holiday season nears completion. Crudes were still short and firm in price.

Acetic Acid—The market for glacial was currently reported to be in an unsettled condition. There was ample acid around to take care of any orders that were coming in. Prices were displaying a tone of weakness. Shading of schedules was still being noted. Demand was spotty.

Where there had been some improvement in the picture recently, the trend was reversed again as demand did not fully materialize. A slight recovery for rayon was evident earlier, but that did not buildup far or last long. There had been very good interest from textile mills in the south, but once again demand was beginning to slide off. The fact that textile people were between two seasons now, was a large factor in present market conditions, it was said.

Acetone—Producers continued to report that the market was holding up very well. Production was moving out rapidly to fill consumer requests. There was ample production to take care of all anticipated requirements. Quotations were still at 8c. per pound in tankcars.

Most trade sources expressed the belief that the majority of the tankcar sales of acetone were at the regular market level. Although there have been some reports of price shading, the frequency has been far less. Further, many trade sources indicated that they have not been able to tie down a firm offer below 8c. for good quality acetone in tankcar quantities.

Alcohol—Clarification of the revisions in price differentials on the west coast indicated that a spread reported to be 5c. per gallon would be carried for four northwestern states comprised of Washington, Oregon, Idaho and Montana. It was said that additional costs prevented elimination of this differential.

A good volume of ethanol continued to move to most consuming channels. General solvent demand has been good for the past couple of months, while such outlets as chemical end-use, pharmaceuticals and cosmetics have also required a good volume of alcohol in the past several weeks. The peak of cosmetic demand was past, as buying for the holiday season started earlier. Ample production capacity was available to meet all anticipated needs.

Amyl Alcohol—Price advances of 9c. for refined 128° to 132° C. material announced the previous week were followed last week. Advances were also made for ACS grade. Quotations for both grades were 43c. per pound and 45c. per pound, l.c.l., respectively.

Butyl Acetate—A slight improvement in demand from lacquer accounts was noted in recent weeks. Producers were able to move their production without any difficulty. Industry capacity was capable of producing more material. But, what couldn't be sold as the ester, could be moved in the form of the alcohol; thereby balancing out the production of butyl acetate and the alcohol.

Production of normal butyl alcohol in August totaled 15,371,375 pounds, while July output was 16,087,596 pounds and August 1953 production was 11,989,221 pounds, Tariff Commission figures show.

n-Butyl Methacrylate — No significant changes in demand were noted for this material. Demand was steady at a satisfactory level. The volume of business for n-butyl is not as large as the methyl market, but most of the methacrylates have shown a degree of increased interest over last year. No revisions in price schedules have come about or were anticipated.

Carbon Disulfide — August production amounted to 40,996,623 pounds, whereas July output totaled 38,714,264 pounds and production in August of last year was 45,695,397 pounds, figures from the Tariff Commission relate.

Carbon Tetrachloride — Production statistics indicate August output was 20,322,944 pounds, against 22,333,588 pounds in July and 25,933,506 pounds in August 1953, according to the Tariff Commission.

Diethylene Glycol — No significant changes were noted in this market. Demand was reported to be holding up in line with generally improved business levels. Tobacco outlets were not receiving as much attention as they used to, but demand from synthetic resins has been a little brighter. Many glycols were enjoying interest for use in polyester resins, which are found to have different properties when the polyol is changed, a source said. There was ample material available to take care of incoming orders. Prices were steady and firm.

Dimethylformamide — There were no significant changes in this market. The material continued to enjoy a steady demand. Prices were firm without change. Supplies were adequate to fill incoming orders. No immediate change in price or supply and demand relationship was anticipated.

Ethyl Acetate—A firm picture of this market was presented by producers. Demand has been relatively good and at a steady pace. Buying from lacquer accounts was slightly improved over what it had been earlier. Producers were selling what they were making. Prices were firm without change.

Ethyl Acrylate—This market continued to run along very well. Demand was stronger than it was at this time last year, but producers were still able to cope with the requirements. Prices were steady and firm. No revisions were immediately anticipated. Activity in this market was

This market reports on industrial aliphatic organic chemicals. Reports on industrial aromatic organics may be found in the Coal Chemicals market, while reports on fine and rare organic chemicals appear in the Drugs, Fine Chemicals, Botanicals market.

Price Trends

Advanced

Alcohol, amyl, ferm., refd., 128°-132°C., 9c. per lb.
ACS grade, 9c. per lb.

Reduced

None

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month
130.45	130.33	132.06

(For Current Prices see page 9)

For Late Market Developments, See Page 4

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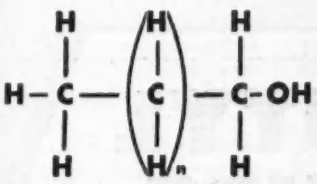

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considered fairly typical of the generally good tone for other acrylates and methacrylates.

Ethylene Dichloride — The market for this material appeared to be in a steady position. Producers were moving about as much dichloride as was being produced. Prices were firm at previously established levels.

Ethylene Glycol — Antifreeze demand has remained a part of this market picture. Movement during the height of the canning season was quite strong. Much of the activity now was fill-in business. But, producers looked at ethylene glycol as being generally firm. Prices were unaltered at levels established at the start of last month. Supplies were adequate to take care of present requirements.

Ethylene Oxide—Producers indicated that demand has been holding up well in this market. Recent contract price advances have had no harmful effects on the oxide or its derivatives. Prices were considered firm at those levels established October 1. Adequate supplies to handle current consumer interest were available.

Furfural—There was an adequate supply to take care of current sales levels. Demand has fairly well held its own level, it was reported. There has been a certain amount of increase from some directions, it was added, but, for the most part, demand held to approximately the same levels. Price schedules for technical material were unchanged at previously established levels.

Furfuryl Alcohol—Prices were unchanged from previous posted schedules. Demand from resins and resinous mortars was steady, as was demand from other consuming outlets. Production capacity is ample to handle present needs promptly. More business could be handled, it was added. Hence, there were no supply problems in this market.

Glycerine—Demand was not too brisk, although a steady volume of refined material was moving, a source stated. Most producers had indicated that consumer interest from all directions was well sustained. Supplies have been good enough to take care of needs. Some sources considered stocks slightly under what they

NOTICE

A new catalog of some 3500 Eastman Organic Chemicals has come out. If you have not already received your copy of *List No. 39,* you can get it by writing to Distillation Products Industries, Eastman Organic Chemicals Department, Rochester 3, N. Y. (Division of Eastman Kodak Company).

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would like to see. However, as the holiday season approached, there was likely to be less need for additional stocks as far as some of the smaller consumers were concerned, it was said. Many of the smaller accounts buy ahead of the season and were now beginning to taper off a bit, it was added. There was expected to be some last minute buying and some replenishing of stocks before the season is completely past.

However, much of the demand from such outlets as resins, cellophane and explosives was steady and keeping refined glycerine moving at an even pace. Prices of refined grades were the same as they had been in previous months. Trade sources indicated that prices would not go down and have not shown any sign of being inclined to advance at this time either.

No changes were noted in quotations of crude glycerine. The material is still very short due to low imports and reduced soaping operations. World demand, however, has relaxed slightly and permitted a little more crude to be bought at prices consistent with the market here.

Stocks were reduced from 49,296,000 pounds at the beginning of September to 47,140,000 pounds at the end of the month, according to information from the Association of American Soap and Glycerine Producers, Inc. In comparison, August stocks started out at 51,017,000 pounds and were cut to 49,296,000 pounds by the end of the month, while September 1953 stocks were at 54,856,000 pounds at the beginning of the month and 55,668,000 pounds at the close of the month.

September production of crude (including synthetic on a crude basis) totaled 16,431,000 pounds, compared with 17,976,000 pounds in August, and 18,471,000 pounds in September of last year. Cumulative output for the nine months from January through September was 155,315,000 pounds, as against 158,309,000 pounds produced in the corresponding period of 1953.

Methanol—A well sustained movement of this alcohol to the antifreeze trade was still a part of the market picture. One producer indicated that it was moving methanol out just as fast as it was being made and deliveries were still not up to date. Methanol was also moving out to industrial needs. Prices were all firm at former listings.

Methyl Acrylate—There has been no change in the amount of activity in this market. Producers said that demand has held up very well at a steady pace. It was felt that the volume was above last year due to a general expansion in demand and use. Prices were considered firm at previously posted levels. Adequate production was available to take care of current consumption requirements.

Methylamines—Price schedules of these amines were very firm at existing levels. It was felt that there was no indication that quotations were likely to move in either direction. Demand was steady at normal levels. Supplies were adequate to take care of current consumption.

Quotations of dimethylamine were at 33c. per pound in tankcar quantities for the 25 percent solution or the 40 percent grade. The 30-35 percent solution and the 40 percent solution were sold at 31c. per pound in tankcars. A 25-40 percent solution of trimethylamine also was quoted at 33c. per pound in tankcars. All the isomers were sold on a 100 percent basis.

Methyl Methacrylate—The volume of orders continued to hold up at a good level. Producers were moving more material than they were last year at this time, it was said. Sufficient production was readily available to handle the demand. Prices were steady and unchanged.

Perchloroethylene—Production of perchloro, or tetrachloro, in August totaled 12,424,303 pounds, compared with July output of 14,967,378 pounds and August 1953 output of 12,243,183 pounds, according to Tariff Commission figures.

Propylene Glycol—A steady call for this polyol came from resin outlets and polyester resins. Prices were firm at levels established for glycols early in October. There were adequate supplies to take care of all anticipated needs. Most of the glycols have held up rather well and have shown improvement in line with the general trend of business, trade sources said.

Pratt & Lambert Names Mather Advertising Mgr.

Pratt & Lambert, Inc., Buffalo, N. Y., has appointed Richard B. Mather advertising manager, succeding the late Granville M. Breinig.

Mr. Mather was first employed by Pratt & Lambert in the laboratory in 1928. In 1929 he transferred to the trade service department, central division, and in June of that year became manager of the architectural service department. He was made sales manager, central division, in 1950.

McKesson & Robbins Head Elected by Commerce Group

George Van Gorder, president of McKesson & Robbins, Inc., New York, has been elected a director of the Commerce and Industry Association of New York. Mr. Van Gorder joined the McKesson organization in 1928 as a vice-president when the Hall - Van Gorder Company, wholesale druggists of Cleveland, Ohio, of which he was an executive, was merged with McKesson & Robbins. He has been president of the company since 1949 and a director since 1942. He previously served as executive vice-president, regional vice-president for New England, and manager of the Boston and Cleveland divisions.

Lakeside Completes Plant

Lakeside Laboratories, Inc., Milwaukee, Wis., has completed construction of a new plant. Approximately 23,500 square feet of new space has been added with the construction of a two-story brick L-shaped wing. New pharmacological laboratories and warehousing facilities are being housed there, and space is provided for additional research facilities.

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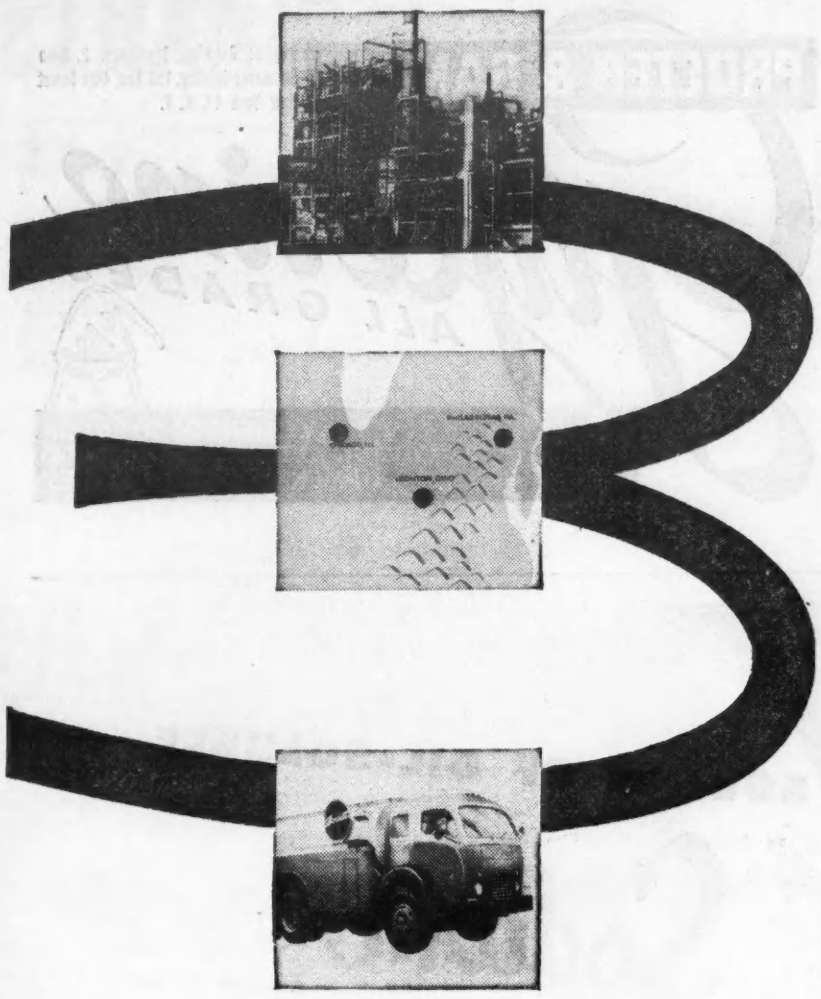

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BARRETT CHEMICALS

Coal Chemicals

Prices of imported crude naphthalene advanced fractionally last week. Quotations of hot-pressed material came up to the level of domestic crudes. Even higher offerings were made, indicating a good degree of strength in the market. Prices became stabilized at the higher levels for acetoacetanilide, acetoacet-o-chloroanilide and acetoacet-o-toluidide.

The rest of the coaltar market showed a steady price pattern. Increasing firmness of imported naphthalene schedules have not influenced domestic prices to any apparent degree. On the contrary, some trade sources felt that the firm position of domestic crude material and the potential for an increase were largely responsible for the advances in quotations of imported naphthalene. A good demand for tar acids continued to bring steady business for cresols, cresylic acid and natural phenol. Technical grades of phenol were picking up with the overall improvement in phenolic resins and better call for USP material.

Creosote sales were still slow. Refined pyridine has not shown any sign of improvement. Among the aromatics, toluol and xylol were felt to be in relatively good shape. There has been a little more production, but demand has held up well enough. Calls for benzol were at a reasonably good volume. But, benzol production was improving faster than the demand. Prices of all of the aromatics remained firm.

Phthalic anhydride demand was rated fairly well. There was good movement to industrial finishes and paint sales, as well as a good export demand. Maleic anhydride was rated satisfactory by some sources, but at an even pace. Benzoic acid was a bit slow.

Steel operations in the week ending November 21 were scheduled to be at 78.9 percent of capacity, or an index rating of 117.2 (1947-49=100), according to the American Iron and Steel Institute. This was equivalent to 1,832,000 tons of ingots and castings, compared with actual production of 1,874,000 tons the previous week, 1,769,000 tons one month ago and 2,044,000 tons one year ago.

Basic Products

Benzol—Price schedules continued to hold firm at previous quotations. No revisions were currently anticipated. Ample supplies to take care of buying interest were available for prompt shipment. More benzol was around in recent weeks than there was a few months ago. The steady buildup of steel operational rates has brought consequent increases in light oil production.

These advances in aromatic output were more noticeable in the benzol market for several reasons. First, the volume is larger than other aromatics. Second, reductions in coking operations resulted in a greater cut for benzol because of changes in yields. Conversely, a return to higher operating levels, increases benzol figures at a faster rate than other light oils. In fact, xylol output was proportionately higher during the low production period because of yield increases with longer coking times and use of foundry coke. Then too, demand for benzol is not as large as it was formerly. The cutbacks in the government rubber program have reduced overall needs somewhat. There has been a relatively steady industrial call, which in some cases was reported to be improving. However, the total production available in the industry from coaltar and petroleum sources is more than curernt consumption.

Production Estimate

Estimated output of coal chemicals recovered from cokeoven operations during the week ending November 21, was as follows:—

Ammonia liquid, NH_3	lbs.	879,602
Ammonium sulfate	lbs.	31,791,522
Benzol	gals.	3,040,909
Coaltar	gals.	13,947,971
Creosote oil	gals.	779,076
Naphthalene, crude	lbs.	2,148,742
Pyridine, refined	lbs.	22,618
Toluol	gals.	598,129
Xylol	gals.	159,585

Price Trends

Advanced

Acetoacetanilide, 5c. per lb.
Acetoacet-o-chloroanilide, 8c. per lb.
Acetoacet-o-toluidide, 4c. per lb.
Naphthalene, crude, imp., ¼c. per lb.

Reduced

None

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
114.59	114.56	114.56	114.59

(*For Current Prices see page 9*)

Creosote—No significant change in activity was noted in this market. Although a fair volume of material was moving, demand was still considered slow. Buying from the railroads has been weak for many months. Supplies were ample.

August production amounted to 9,188,084 gallons, whereas July output of creosote was 13,151,002 gallons, and August, 1953, production totaled 13,683,335 gallons, Tariff Commission figures show.

Tar distillers turned out 6,535,034 gallons of the total in August, 10,435,538 gallons in July, and 9,522,179 gallons in August of last year. Cokeoven production this August was 2,653,050 gallons, whereas in July it was 2,715,464 gallons, and in August, 1953, it was 4,161,156 gallons.

Cresols—Firm prices were maintained in the markets for these tar acids. Demand for the various fractions continued to move material along at a good clip. Activity from cresylic resins was good. Sales from other outlets also held up well. There was adequate production available to take care of most needs promptly.

m-p-Cresol has been enjoying steady call from tricresyl phosphate. Resin grades were moving well to cresylics. o-Cresol has been relatively satisfactory. Supplies of the ortho isomer were no longer overabundant. Demand picked up as overall interest in tar acids improved.

Cresylic Acid—Supplies were adequate to take care of present consumer requirements. Demand was well sustained at a good pace. Producers moved material to normal consuming channels at approximately the same level as October sales. However, there has been some indication of a little improvement in the need. A large part of current business was going to cresylic resins, but other outlets held up equally well at their own levels.

Naphthalene—Prices of imported 78-degree material continued to firm up last week. Quotations came up ¼c. to make 5c. per pound the established bottom of current trading. There were some offerings and some contracts reportedly made above 5c., but that figure was generally judged as the current market level. It was said that the crimp in domestic supplies has perked up buying interest for imported crudes.

Just how much o the added demand for hot-pressed material was coming from a snug supply situation, and how much resulted from consumer desire to improve inventories before a potential price advance in domestic schedules, was undetermined. The fact is, domestic prices were still at the 5c. per pound level. And, on paper it did not look economical to buy imported material at the same price or higher, as long as supplies were available. The justification for such a move could be that prices were expected to rise, it was said. Many trade sources have been watching naphthalene schedules very closely since the first of September, in anticipation of such a move. There was no outward sign that increases are in the making.

Phenol—Continued improvement in demand was noted for synthetic and natural material. Phenolic resins and adhesives were expanding in line with overall business trends. There was adequate material of USP and technical grades to take care of all anticipated requirements in the market. Prices remained firm at previously established levels. No revisions in schedules were looked for immediately.

Pyridine—Demand was still slow for refined material. Producers were moving occasional small amounts, but most sources reported that steady, good-sized orders have fallen away during the year. Where there had been any significant buying at all, it appears to have been the result of consumer inventories running low at the same time. Installation of recovery equipment has had much to do with lower total consumption needs. Price schedules were unchanged at 95c. per pound in l.c.l. quantities.

Toluol—A fairly well sustained demand from the lacquer industry for the furni-

For Late Market Developments, See Page 4

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KOPPERS Coal Chemicals

KOPPERS COMPANY, INC., Tar Products Division, Dept. 1117T-A Pittsburgh 19, Pennsylvania

ture trade and some use in the automotive industry for finishing operations held the market virtually in the same position as recent months. There was movement to other civilian uses, such as pharmaceuticals and detergents and general solvent needs, all of which added up to a reasonable demand.

Greater output along with the pickup in steel operations has assured the market of an ample supply to take care of all domestic needs, and even resulted in a couple of extra tankcars on occasion. Most sources were still in what they considered not too bad a balance between supply and demand.

Xylol—The market for this light oil was still relatively well balanced and in adequate supply. Demand for the solvent was well sustained. Production levels have not significantly built up with higher steel output, partly because of the fact that yields were higher with longer coking times. Further, an increase in output was less visible because of the relatively small volume normally produced, compared with other cokeoven byproducts. Prices held firm at former listings. No revisions were expected.

Intermediates

Acetanilide—Demand for technical material was not too strong, suppliers said. There has been a slight improvement noted since fall business began to expand. Most of the technical material moved for the production of sulfa drugs. Supplies were adequate and prices were firm.

Acetoacetanilide—Prices were stabilized at the new higher levels, it was learned last week. Carlot schedules were now a straight 80c. per pound, while less than carlots were at 81c. per pound. Supplies were sufficient to handle present consumer requirements.

Acetoacet-o-chloroanilide — Price increases of 8c. per pound in recent weeks have resulted in a market level of $1.35 per pound for carlot quantities, it was reported last week. Less than carload quantities were now $1.36 per pound. Prices were stable at their new quotations. Adequate supplies were available to take care of consumer needs.

Acetoacet-o-toluidide—The 4c. increase in schedules was generally adopted as the market level, it was learned last week. Thus, current listings called for 82c. per pound in carlots and 83c. per pound in l.c.l. quantities. Demand for AAOT was steady and unchanged. Ample supplies were on hand to take care of incoming orders.

Benzoic Acid—There was no significant pickup in demand for technical material. Producers said the call from synthetic fibers, where it is used in dyeing operations, was slow. Adequate supplies to take care of consumption were readily available. Prices held firm at previous listings.

Maleic Anhydride—Producers said that this market continued to hold up well. Demand was steady enough to move current production along at a relatively satisfactory pace. Buying interest has not expanded enough to tap all of the production capacity in the industry yet. Current calls were coming from polyester resins and from alkyds to some extent.

p-Nitrophenol—Demand for this intermediate was normal. Production was sufficient to take care of all consumer requests without unusual delay. Prices were considered stable at 50c. per pound, where they have been for many months.

Phthalic Anhydride—Various producers indicated that demand was pretty good. Movement for alkyd resins was seeing a slight improvement with the pickup in automobile production as well as a steady flow for paint sales. Ample production of phthalic was readily available to take care of current consumption. Some producers had a larger stock to work from, depending upon their size. A number of makers have stated that they were moving just about what they were producing.

Production of phthalic in August amounted to 19,128,518 pounds, compared with 18,531,972 pounds in July (revised) and 19,659,456 pounds turned out in August 1953, figures from the Tariff Commission relate.

Styrene—August production of government and privately owned plants combined totaled 59,033,331 pounds, as against July output of 53,434,149 pounds (revised), and 67,130,599 pounds produced in August of last year, Tariff Commission statistics relate.

Toluene Sulfonic Acid—No significant changes were noted in this market. A fairly steady use as a catalyst kept the material moving at an even pace. Adequate supplies were readily available for current needs. Prices were firm and unchanged at 16c. per pound in carlots and 17½c. per pound in l.c.l. quantities.

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Washine National's New Owners

Morris M. Schlier (left) and Herman M. Shulman have purchased complete control of Washine National Sands, Inc., Long Island City, N.Y., makers of sodium hypochlorite and distributors of industrial and laundry chemicals. Mr. Schlier, the new president of the company, has been with Washine as technical director since 1939. Mr. Shulman is Washine's new executive vice-president and treasurer. Associated with St. Regis Paper Company, R. H. Macy & Co. and Philipp Brothers Chemicals, Inc., as a chemist prior to joining Washine, he has been manager of chemical sales at the Long Island City concern since 1943.

Alcohol May Be Gauged By Weight or By Volume

The alcohol tax division of the Internal Revenue Service ruled last week that denatured alcohol removed from a denaturing plant in tank cars or tank trucks may be accurately gauged either by weight or by volume.

Section 182.90 of regulations 3, relating to weighing tanks, provides in part that where denatured alcohol is to be removed in tank cars, or in tank trucks (as authorized by section 182.728) or by pipeline, the proprietor of the denaturing plant must provide for use in weighing such denatured alcohol one or more suitable weighing tanks.

Except as provided in this section, the regulations are not specific in respect of the method of gauging denatured alcohol removed from the denaturing plant in tank cars or tank trucks pursuant to the provisions of section 182.728. While the requirements of this section apply in the case of pipeline transfers as well as transfers by tank car or tank truck, it will be noted that section 182.730, authorizing the withdrawal of denatured alcohol by pipeline, provides in part that such alcohol may be "weighed or measured by volume in a tank equipped with suitable scales or a measuring device on the denaturing plant premises."

In view thereof and since the method of gauging denatured alcohol by volume has been found to be generally satisfactory, it is held that, notwithstanding the implication in section 182.90 of regulations 3, denatured alcohol removed from a denaturing plant in tank cars or tank trucks may be gauged either by weight or by volume.

Soap, Detergent Sales Rise Noted in Nine Month Period

The Association of American Soap and Glycerine Producers has announced an increase in sales of soaps and synthetic detergents for the first nine months of this year. Manufacturers participating in the quarterly sales census, representing a high percentage of industry volume, report sales of all soaps and synthetic detergents totaling 2,698,396,000 pounds, 5 percent ahead of 1953, with a dollar value of $608,613,000, which was 6 percent better than last year.

Sales of synthetic detergents, continuing to climb, amounted to 1,579,393,000 pounds for the nine months, up 10 percent over the same period in 1953. Dollarwise, those sales total $363,014,000 an increase of 11.7 percent over the first nine months last year.

Total soap sales reported for the period amounted to 1,119,003,000 pounds, valued at $245,599,000. In tonnage, this was a drop of 11.1 percent from the comparable period in 1953, and a decline of 5 percent in dollar value. Synthetic detergent sales now represent 58.5 percent of the total market, an increase of 5.4 percent for the period, compared with 1953.

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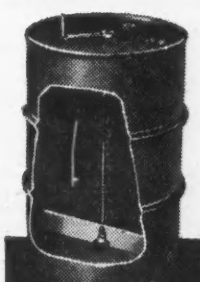

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Textile and Leather Chemicals

Business in most textile and leather chemicals last week consisted of moderate quantities for prompt delivery. Consumers are keeping inventories low and interest in forward deliveries continued limited. An easy tone developed in the potato starch market in Maine and fair sales were reported at a fractional decline. Prices in the local and Idaho markets were held at former levels. Sago and Brazilian tapioca flours for spot delivery also were lower, while cost of replacements was unchanged. Fair volume of trading was reported in Siamese flour for forward delivery. Demand for corn starch and dextrin was fairly active for immediate delivery. Prices were maintained at prevailing levels.

Some improvement was noted for tanning material replacements, though actual trading was still slow. Higher prices were named for myrobalans for shipment, ranging from $1 per ton for ordinary and crushed and $5 for genuine. Valonia was weaker for shipment. Beards declined $5 per ton and cups, $3, while extract was off ¼ cent per pound. Mangrove bark also was unsettled, with African bark $1 per ton lower, while South American grades unchanged, but nominal.

Production non-cellulosic fibers totaled 84,400,000 pounds during the third quarter of this year, according to the Textile Economics Bureau. This total represents a loss of 5 percent compared to the second quarter, but was 10 percent higher than the third quarter of 1953. Output of non-cellulosic filament yarns and monofilaments was 63,800,000 pounds, 7 percent less than the second quarter, but slightly higher than in the third quarter last year. In the staple and tow category, non-cellulosic produced in the third quarter was 17,600,000 pounds, 200,000 pounds more than the second quarter and 6,300,000 pounds more than the third quarter last year. For the first three quarters of 1954, non-cellulosic fiber output aggregated 240,600,000 pounds, a gain of 5 percent compared to the corresponding period in 1953. Output of filament yarn and monofilaments was 194,500,000 pounds, up 7 percent. Staple production, amounting to 46,100,000 pounds, was 3 percent lower than in the first three quarters of last year.

Sizing Materials

Albumin Blood—Fair volume of business was noted for prompt requirements. Prices were unchanged, ranging from 65c. to 80c. per pound, depending upon quality. Stocks were ample.

Corn Dextrin—Business was fairly active for immediate delivery. All grades were maintained at former levels. Gum was quoted at $6.85 per 100 pounds, paper bags, carlots, New York delivery; canary $8.65, dark $8.70, and white $8.53, same basis. Less carlots were 15c. per 100 pounds more.

Corn Starch—Moderate sales were reported for prompt requirements. Prices were unchanged and steady. Pearl was quoted at $7.14 per 100 pounds, paper bags, carlots, and powder, $7.26 per 100 pounds, New York basis. Smaller quantities were 15c. per 100 pounds higher. Visible corn supply increased 3,678,000 bushels to 24,614,000 bushels for the week ending November 12, compared with 32,961,000 bushels for the corresponding week last year, it was reported by the Chicago Board of Trade.

Department of Agriculture estimated the corn crop at 2,938,713,000 bushels as of November 1, compared with 2,949,643,000 bushels the previous month; final 1953 production of 3,176,615,000 bushels and 10-year average of 3,057,464,000 bushels. Yield per acre was indicated at 36.7 bushels, against 36.8, October 1; 39.6, a year ago and 35.7, the 10-year average.

Egg Albumin—Good volume of business was passing for prompt delivery. Market tone remained steady. Flake ranged from $1.27 to $1.29 per pound, and powder $1.31 to $1.33 per pound, spot, according to quantity. The technical grade was in fair request for actual needs. Prices were unchanged at 85c. to 87c. per pound, spot as to quantity.

Egg Yolk — This market continued steady, despite spotty demand for actual needs. Prices were maintained at $1.04 to $1.07 per pound, spot, depending upon quantity.

Price Trends

Advanced

Myrobalans, J1's asst'd, $5 per ton.
crushed, $1 per ton.
ordinary, $1 per ton.

Reduced

Mangrove bark, African, $1 per ton.
Potato starch, Maine, ¼c. per lb.
Sago flour, ¼c. per lb.
Tapioca flour, ¼c. per lb.
Valonia beards, $5 per ton.
cups, $3 per ton.
extract, ¼c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
94.08	94.56	94.56	98.70

(*For Current Prices see page 9*)

Potato Starch—Consumers showed more interest in forward requirements. Sales of moderate volume were booked in Maine and Idaho for forward delivery. The Maine market was easier and trading took place at 6¼c. per pound, carlots, f.o.b. mills, a reduction of ¼c. per pound, while Idaho flour was unchanged at 6¾c. per pound, same basis. Production was still limited in the eastern and western producing areas. Stocks on spot were quotably unchanged at 8¼c. to 8¾c. per pound, exwarehouse, depending upon quantity. Demand for foreign starch continued inactive. Danish was offered at 7.3c. per pound, and Dutch, 7⅞c. per pound, carlots, exdock, duty paid.

Sago Flour—Slow demand created a weaker tone in the local market and quotations were off fractionally. Raw was quoted at 6½c. to 6¾c. per pound, exwarehouse, as to quantity and refined, 8¼c. to 8¾c. per pound, exwarehouse, depending upon quantity. Prompt shipment was unchanged and nominal at 5¾c. per pound, carlots, exdock.

Tapioca Flour—Improved buying interest was reported for forward delivery and a good volume of business took place in Siamese grades. Trading in Brazilian was still slow. Prompt shipment of better grades of Siamese flour were quoted at 6¼c. to 6½c. per pound, carlots, exdock and Brazilian at 8¼c. per pound, same basis. Top grade Siamese on spot was unchanged at 7c. to 7½c. per pound, exwarehouse, as to quantity, while Brazilian was lower and available at 8¾c. to 9c. per pound, same basis.

Tanning Materials

Chestnut Extract — Trading was restricted to actual requirements. Market was quotably unchanged. Liquid 25 percent tannin was quoted at 4c. per pound, tankcars, f.o.b. works; 4¾c. per pound, barrels, carlots, and 5.10c. barrels, less carlots; powdered 60 percent tannin, 10.32c. per pound, bags, carlots, and 11.02c. bags, less carlots, same basis.

Cutch—Shipments were well held at 8½c. per pound, exdock. Offerings continued light. Buying interest was fair.

Mangrove Bark—Business continued inactive. African bark for shipment was unsettled and lower. Prompt shipment was quoted at $68 per ton, exdock. Columbian was unchanged at $58 per ton, and Ecuadorian, $54 per ton, same basis.

Myrobalans—This market was firmer due to limited offerings for shipment. JI's assorted were advanced to $54 per ton, exdock and crushed ranged from $63 to $65 per ton. Ordinary also was higher at $43 to $44 per ton, same basis. Solid extract 55 percent tannin was unchanged at 7¼c. per pound and 50 percent, 7c. per pound, exdock, plus duty.

Quebracho Extract—While trading was restricted to an occasional lot for prompt shipment, the primary market remained steady. Solid ordinary guaranteed 63 percent tannin was held at 11 21/32c. per pound, exdock, plus duty, and clarified, 64 percent at 12 23/64c. per pound, same basis.

Valonia—Increased offerings and quiet demand weakened the market and prices were lower for all grades. Beards were dropped to $56 per ton, exdock for prompt shipment; cups to $45, same basis. Extract 63 percent tannin also was lower at 8¼c. per pound, exdock, plus duty.

Wattle—Buying interest continued light. Shipments were unchanged and well held. Fair average bark was quoted at $98 per ton, exdock, and merchantable at $94 per ton, same basis. East African extract, 60 percent tannin was offered at 9¾c. per pound, exdock, plus duty, while South African was held at 10c. per pound, same basis.

For Late Market Developments, See Page 4

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Drugs, Fine Chemicals, Botanicals

The drugs and fine chemicals market saw two rather routine price changes last week in addition to one change in a somewhat unfamiliar item. The latter was podophyllum resin, which was advanced 70 cents per pound. The reason given for the increase was a familiar one, higher cost of raw material, which, in this instance, was mandrake root. Although spot prices have not advanced on the root, as far as could be ascertained, supplies were reported to be tightening due to the smaller collection this year. There has been less tendency to shade prices among dealers, it was said.

The other items to be advanced were crude iodine and theobromine alkaloid and some of its derivatives. Chilean crude iodine was advanced 30 cents per pound in the first price change since last April. At that time the price was cut sharply in an effort to squeeze lower priced Japanese crude which had, for some time previous, been selling well below the list price for both the Chilean and the domestic crudes. Although partially successful in this action, Japanese producers have continued to ship to this market at prices competitive with other crude producers. There have been reports that Japanese crude iodine producers have been under government subsidy and as a result, not hurt financially to the extent normally expected in such a situation. With the new price schedules on crude iodine up 30 cents, Japanese producers are expected to be in a better position to continue to compete with both domestic and Chilean crudes, it was said.

Theobromine alkaloid prices were advanced 15 cents per pound last week in the third advance in five months. The total amount of price increase in this item this year was 75 cents, it was noted, a full 25 percent hike. The steadily rising costs of raw material has been held accountable for the three increases since last June. Cocoa press cake is the source from which theobromine is extracted. The steadily rising costs of cocoa beans has, of course, been reflected in higher costs of all by-products. Theobromine and sodium acetate in addition to theobromine sodio-salicylate were advanced 15 cents across the board. Caffeine prices remained unchanged but very firm in view of the raw material situation. There was some possibility of a further price advance in this item, according to some trade sources.

Natural Brazilian menthol was reported to be lower with inquiry dull. Prices were off appreciably. The reported poor yield in China as a result of the floods there, has driven the London price for Chinese menthol up considerably and hence, Brazilian menthol prices may be affected, it was said.

Agar — The market, on spot, was seemingly unaffected by conditions at source. Although prices for shipment from Japan continue quite firm and high, spot sales are being made in this market below reported replacement costs. Consumers have not given any indication of recognizing the relative shortness in supply of high test agar in the spot market. Demand, although much improved over earlier this year, could be better and dealers are not anxious to discourage business by advancing prices.

According to trade reports, there is a good deal of poor quality agar available. On the whole, the market does not suffer from any dearth of material since there are enough consumers using the poorer quality material thus limiting the consumption of the more expensive, higher priced agar.

Caffeine—The possibility of further price increases in domestic caffeine was accentuated last week by the advance in theobromine prices. Caffeine and theobromine, both use cocoa press cake, essentially, as the major source of raw material for their manufacture. An end to the steady rise in world cocoa bean prices apparently is not yet in sight. Despite a drop in consumption of cocoa bean products in this country, Europe and Russia and her satellites have been active buyers at high prices. The ultimate outcome of this situation was conjectural but it seemed likely that caffeine would continue at firm price levels.

Camphor—There were no new developments in camphor last week, as far as could be ascertained. Synthetic camphor tablets remained unchanged, pricewise, the recent hike in the powder not having had any effect upon tablet quotations at this time. Tablets of synthetic camphor will probably be advanced in price when existing stocks which were made from lower priced synthetic camphor, are depleted. Natural camphor continued in tight supply. With world demand for natural camphor down considerably, prices last year declined to a point where it became unprofitable for camphor producers to make camphor. Hence supplies have dwindled while prices has correspondingly advanced in the customary market reaction to such a situation.

Digitoxin—Demand for this alkaloid was reportedly at fair levels, generally speaking. Supplies were ample and expected to continue adequate in view of the fact that most of the digitoxin alkaloids used in this country today are made from digitalis grown on native soil. Where formerly, consumers were largely dependent upon imported materials from France and Switzerland, the move of domestic producers to eliminate as much as possible, the dependence upon foreign sources of supply, has begun to bear fruit. According to reports, several of the larger producers of digitoxin alkaloids use raw materials grown in this country.

Iodine—Chilean crude iodine prices were advanced 30c. per pound last week in the first price change since last April. The increase was a reversal of the trend at that time which resulted in a very severe price cut, a move which was reportedly made in order to drive Japanese crude iodine from the market. Both the producers of Chilean crude and also domestic crude were being undersold by lower priced Japanese crude material, at the time.

Trade observers in some quarters commented that last week's price hike appeared to be an indication that the principals involved could no longer afford to sell at the extremely low price of $1.15. The new price was $1.45 per pound. Japanese imports of crude iodine have continued to come into this country over the past six months and reports that producers in Japan were being subsidized, at least partially, by the government there, have been heard in several quarters. Accordingly, Japanese producers appeared not to have been too concerned about the low market price which has prevailed since the last change in April.

Resublimed iodine prices were unaffected by this latest change in crude prices. Since the reduction in the crude price last April was only just about three weeks ago but a cut in the price for resublimed iodine, it would appear that last week's advance in the crude would not be paralleled by resublimed iodine for some time to come.

Menthol—Demand for Brazilian menthol was reported to be spotty, on the whole. Most consumers of menthol have already stocked up to cover their winter needs and consequently, inquiry was dull. Prices as a result, have slumped steadily with last week's spot market reported ranging from $8 to $8.15 per pound. Japanese menthol continued extremely scarce on spot with each sale on an individual basis.

Molasses — Feed molasses prices were unchanged at most points during the week ending November 16, 1954. Demand in the New Orleans area is considered moderate by most distributors, but generally below normal for this season. A good demand continues at the Texas port terminals. Cane blackstrap price at New Orleans continues steady at 10c. per gallon. East and West coast demand is moderate to good at most points. The continuation of a short supply of citrus molasses in Flori-

For Late Market Developments, See Page 4

Price Trends

Advanced

Iodine, crude, 30c. per lb.
Podophyllum resin, 70c. per lb.
Theobromine alkaloid, 15c. per lb.
and sodium acetate, 15c. per lb.
sodio-salicylate, 15c. per lb.

Reduced

None

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
66.98	66.96	66.96	72.73

(For Current Prices see page 9)

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da has kept blackstrap demand at a high level in that area.

Podophyllum Resin—Due to higher raw material costs, the price of podophyllum resin has been advanced 70c. per pound. The raw material, in this instance, is mandrake root. Collections of this root during the past Summer were below normal due to adverse weather conditions. As a result, shipments prices have advanced substantially, according to trade reports.

The current price on podophyllum resin was $9.45 per pound. The increase was the first price change in some time. Demand for this item was said to be running at fairly steady levels, on the whole.

Theobromine—The price of theobromine alkaloid was advanced 15c. per pound last week in the third increase in five months. This latest price hike was not surprising in view of the growing seriousness of the raw material supply situation. Since theobromine is made from cocoa press cake, the need for advancing theobromine prices is understandable. The world price for cocoa beans and hence all its by-products has increased appreciably during the past year or more. Despite lessened chocolate consumption in this country, Europe and Russia and her satellites have been readily paying the higher prices asked for cocoa beans. Since caffeine is closely related to theobromine in having a common raw material source, it would not be unlikely for further increases in caffeine prices to be made in the near future, according to trade sources.

Also included in last week's theobromine price boost were its principal compounds, theobromine sodio-salicylate and theobromine and sodium acetate. The former was advanced 15c. bringing current quotations to $3.35-$3.40 per pound, and the latter also 15c.; which raised current quotations to $4.05-$4.10 per pound.

Botanicals

Trading activity continued fairly steady last week in the botanicals market. Although the supply situation was generally good, several items remained in a tight position. With collection of virtually all domestic botanicals over for this year, stocks on hand will have to last until next year.

Collections of mandrake root, while appreciable in some areas, were below average, on the whole. Prices on this item have firmed and were expected to continue strong in the immediate future. As an indication of the firming trend in mandrake root, the price of

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podophyllum resin was advanced substantially last week. Wahoo root bark continues nominal in the absence of offerings on the open market. The few lots of this botanical remaining from this year's collection were believed held in very strong hands.

Seasonal botanical items such as white pine and wild cherry barks were reportedly moving in good volume with supplies ample to accommodate consumer needs. Horehound herb and cocillana bark, which go into cold preparations, were in tight supply, however. Shipments of the latter have been delayed considerably and contracts reneged upon by some shippers, according to trade sources. In medicinal compounds made up of botanical drugs, compositions can sometimes be varied by the manufacturer to include higher percentages of readily available botanicals while cutting down on the use of those which are scarce and consequently, high priced. Witch hazel and elm barks were in adequate supply. The latter had been somewhat short in supply earlier this year but this situation has been alleviated, according to the trade sources. Spot prices have declined, as a result.

Of the imported botanicals, the situation in soapbark appeared to be most serious, at the present time. Collections of the bark have been delayed considerably by adverse weather conditions and quantities contracted for have been extremely slow to arrive.

Digitalis Leaves—Demand for digitalis leaves was reported to be moving at steady levels. Supplies were ample for current inquiry and expected to continue in the immediate future. It was reported that virtually all the digitoxin alkolids produced in this country are manufactured from domestically grown digitalis.

Ergot—The spot market remained quiet and easy. There was reported to be a substantial amount of low testing material in this market and as, a result, prices were subject to shading. There were reported to be elements in the market offering ergot for sale who are not customarily factors in this market. With considerable barter trades being made in addition to the inability in some cases to bring out of Europe assets in the form of currency, some companies have been bringing in such items as ergot and offering it on market, it was said, resulting in confusion to the consumer.

Mandrake Root—Although collections of this botanical this past season were of a fair size, the spot market has begun to show a firming trend. Mandrake root is the raw material used in the production of podophyllum resin. It was noted that the price of this item was substantially advanced last week as a result of the higher prices being paid at origin.

Orris Root—The spot market continued very firm last week. Shippers appeared to be holding back with offers reportedly few in number and high in price. The spot market has not reflected this trend as yet and prices remained unchanged. It would seem that shippers were holding back new crop root in an effort to force the market to higher levels. Whether consumers would willingly meet higher prices were conjectural, however.

Papain—There was little if any change since last reports. The spot market has been indifferent to higher shipping prices quoted from origin. Actually there was a considerable quantity of papain for sale, on spot. The quality of various lots was said to run the full gamut from the lowest to the highest. The government restrictions set up in Ceylon earlier this year relating to th quality of papain exports have apparently gone by the board and papain of all varying qualities continues to come into this market. African papain was also reported to have considerable variance, qualitywise. Prices ranged from $4.00 to $4.50 on the African quality with Ceylon material at $3.00 to $3.50.

Canada Inviting Inquiries By American Manufacturers

The industrial development branch of the Canadian Department of Trade and Commerce is inviting inquiries from United States manufacturers who are interested in introducing their products on the Canadian market by means of a licensing or royalty arrangement with a Canadian manufacturer.

The industrial development branch has stated that it has facilities for circulating information on licensing proposals to Canadian business. Correspondence should be addressed to the industrial development branch, Department of Trade and Commerce, Ottawa, Canada.

Thurmond Is New Name Of C. U. McClellan Labs

Thurmond Industries, Inc., is the new corporate name of the former C. U. McClellan Laboratories Corporation, Los Angeles. In addition to the corporate name change, president Charles D. Thurmond announced the appointment of Richard M. McFarland as assistant to the president. Mr. McFarland, a chemical engineer with training in production of agricultural chemicals, was formerly a development engineer at Brea Chemicals, Inc., and a production supervisor for E. I. duPont de Nemours & Co. Charles H. Parisek, formerly sales manager of West Coast Chemicals & Solvents at Culver City, will remain as vice-president and sales manager of Thurmond Industries, Inc.

Lederle Labs Names Mgr.

Charles K. Piercy has been named domestic sales manager of the Lederle Laboratories Division of American Cyanamid Company at Pearl River, N. Y. Mr. Piercy was formerly assistant domestic sales manager. He replaces T. B. Van Stone, who has resigned for reasons of health.

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Monobromobenzene. Clear, colorless, heavy liquid. Specially prepared for use as an intermediate in preparation of organic compounds. For introduction of the phenyl radical and in Grignard-type reactions. A pure material with a 4 degrees C. boiling range; specific gravity 1.495.

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Cyclopentyl Bromide. A clear, colorless liquid with an aromatic odor. Specially prepared for use in organic synthesis, particularly for introduction of the cyclopentyl radical. Many potential uses in manufacture of pharmaceuticals. Purified grade, 2 degrees C. boiling range.

β-Diethylaminoethyl Chloride Hydrochloride. (DEC). $(CH_3CH_2)_2 NCH_2CH_2Cl \cdot HCl$. A granular solid. Specially suited for use as an intermediate in organic chemical manufacture, including the manufacture of antispasmodic agents and other pharmaceuticals.

β-Dimethylaminoethyl Chloride Hydrochloride. (DMC). $(CH_3)_2 NCH_2CH_2Cl \cdot HCl$. A granular solid. Specially prepared for use in manufacture of antihistaminics and other pharmaceuticals. Other potential uses in organic synthesis. Relatively non-toxic in hydrochloride form.

β-Dimethylaminoisopropyl Chloride Hydrochloride. $(CH_3)_2 NCH_2CHClCH_3 \cdot HCl$, (DMIC). An organic intermediate similar in appearance and properties to DEC and DMC. Specially prepared for manufacture of analgesics and other pharmaceuticals. Other potential uses in organic synthesis.

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Alcohol Rule Changes Set; Public's Views Are Invited

The Treasury Department is planning to make a series of amendments to the regulations covering industrial alcohol and has invited interested persons to submit their comments to the director of the alcohol and tobacco tax division within fifteen days. Text of the proposed new regulations were published in the *Federal Register*, November 17.

The regulations are intended to implement the changes in the law provided for in the Internal Revenue Code of 1954. They provide for ten important changes in existing proceedures as follows:—

1. By permitting the conduct of other businesses on the industrial alcohol plant premises.

2. By deleting the restriction that industrial alcohol plants may not be located within 600 feet of a vinegar plant using the vaporizing process.

3. By deleting the restriction that ether may not be produced on industrial alcohol plant premises.

4. By deleting the requirement that signs at industrial alcohol plants, bonded warehouses, and denaturing plants be painted in oil colors or gilded.

5. By deleting the requirements for a special application to build a fence around an industrial alcohol plant, bonded warehouse, or denaturing plant.

6. By requiring the registry of only those stills set up for distillation, redistillation, or recovery of alcohol or rum.

7. By changing the retention period for wholesale liquor dealer records from four to two years.

8. By deleting the requirement that export stamps be paid for.

9. By permitting the recovery of denatured rum.

10. To implement administrative decisions relative to individual sureties, the approval of forms 1614 and 1696 by the storekeeper-gauger, the methods of tax-payment of alcohol, tank truck shipments, the transfer of instructions to employees from regulations to internal management documents, the use of form 92, the date of submission of reports by permittees, the elimination of form 129, and the removal of regulatory provisions relative to ethyl acetate.

Nopco Ass't Vice-Pres.

Harold A. Swanson has been appointed assistant vice-president of Nopco Chemical Company, Harrison, N. J. Mr. Swanson will be in charge of the various functions of Nopco's vitamin division and will also have charge of the vitamin research program.

Kerr-McGee Granted Refund Of Deposit on Oil, Gas Bids

Kerr-McGee Oil Industries, Inc., Tulsa, Okla., has been refunded its deposit of $3,002,800 made with the Department of the Interior last month when it bid for some of the oil and gas leases on the outer continental shelf off the coast of Louisiana.

The return of the money was authorized by acting Comptroller General Frank H. Weitzel because the firm had erred by bidding for the leases on the basis of "block" numbers instead of the "tract" numbers. Mr. Weitzel stated that the facts and evidence showed an error was made and "it is a fundamental principle of law that the acceptance of a bid with knowledge of an error therein does not consummate a valid and binding contract."

Kerr-McGee offered $15,014,000 for leases on more than a dozen tracts of submerged lands at the October 13 sale. In most of the cases it was the sole bidder for the tracts, and in two other cases it was the high bidder.

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Koppers Names Powell To Position in Research

Dr. A. R. Powell associate manager of the central research department of Koppers Company, Pittsburgh, Pa., has been named acting manager of that department following the resignation of Dr. G. F. D'Alelio. Dr. D'Alelio, who has managed Koppers research since 1949, has consented to remain with the company for the time being to carry out a special project on high-impact plastics.

Dr. Powell will coordinate research activities of Koppers' six operating divisions and assume responsibility for operations at the company's laboratories at Verona, Pa., and for coordination of company-sponsored fellowships in various national research institutions and universities.

Rapid Tax Write-Off Total Rises by 42 in Two Weeks

The Office of Defense Mobilization approved certificates for accelerated tax amortization for forty-two new or expanded facilities, amounting to $47,945,378, during the period October 21 through November 3, it was announced last week.

The additional certificates approved brought the total of such approvals to 19,230 involving investments in new projects totaling $29,595,672,000. Of the total investment, 60 percent or $17,856,552,000 is eligible for amortoziation at the accelerated rate.

Stepan Has Alkylamide For Heavy Duty Cleaners

Stepan Chemical Company, Chicago, has announced the development of "Stepan HDA-7," a non-ionic of the fatty acid alkylamide type for use in heavy duty, hard surface cleaners. The product, it was said, makes it possible to hold in solution a phosphate content as high as 11 percent for greater cleaning power. The suggested formulation offered by Stepan has a cloud point of approximately 35 degrees Fahrenheit and its efficiency is not impaired upon thawing after accidental freezing, it was said.

Linseed Oil for Export Being Offered by USDA

The Department of Agriculture has offered on a competitive bid basis for export sale a limited quantity of raw linseed oil. The offer, from stocks acquired by the Commodity Credit Corporation in its flaxseed crushing program, is limited to a total of 25,000,000 pounds.

Bids for the oil must be made in accordance with Announcement CT-OP-4, copies of which can be obtained from the Cincinnati, Ohio, CSS Commodity Office. Offers will be considered basis f.o.b., buyer's vessel, New York port. The buyer is responsible for survey of the vessel. To facilitate purchase of the oil for further refining by domestic processors prior to export, bids also will be considered basis in-store, storage locations. Information regarding these locations can be secured from the Cincinnati Commodity Office.

Bids must be submitted to the Cincinnati Commodity Office, Commodity Stabilization Service, 1010 Broadway, Cincinnati 2 Ohio, not later than 2 p.m. EST, November 29. Acceptance or rejection of bids will be made not later than 2 p.m. EST, November 30. Unsuccessful bidders will be notified by collect telegram only if a request for such notification is made at the time the bid is submitted. Any or all offers may be rejected.

The buyer is responsible for obtaining any required government export permit and license. Under a previous offering of linseed oil by the Cincinnati Office (October 13) sales were as follows:—20,000,000 pounds were sold for 7c. per pound, f.o.b. vessel, New York and 900,000 pounds were sold in store at midwest facilities for 6½c. per pound.

Government Aid Named For Trade Fair Program

Don D. Canfield has been appointed by the Department of Commerce as a consultant for its recently organized program for expanding trade through greater participation by United States industries in international trade fairs. Mr. Canfield, who will make his headquarters at the New York field office of the Department of Commerce, 110 East 45th street, will assist firms in preparing their plans for exhibiting United States products and services in leading trade fairs abroad. He previously served the Department of Commerce as a trade fair consultant, having aided in the presentation of government-sponsored exhibits in Berlin, Germany, and Izmir, Turkey, in 1952.

Mr. Canfield, who has had twenty years of experience in the industrial display field, is a former president of the Exhibit Producers and Designers Association, of Industrial Displays, Inc., New York.

Fertilizer Tonnage Down

—Continued from page 7

reduced farm income due to lower prices for farm commodities.

Regionally, consumption on a tonnage basis increased only in the west north central and far western areas. The south Atlantic region, with the largest total consumption, showed the greatest decrease tonnage-wise with a drop of nearly 300,000 tons, or about 4 percent. Consumption in the west north central region was over 200,000 tons, or 11.5 percent, greater than a year earlier.

Tonnage consumption in the United States by regions, as compared with 1952-53, was as follows:—

	1952-53	1953-54
New England	430.282	404,565
Middle Atlantic	1,543,639	1,476,000
East North Central	4,193,512	4,089,631
West North Central	1,804,876	2,013,303
South Atlantic	6,941,602	6,655,582
South Central	4,334,752	4,229,948
Western	1,354,785	1,421,520
Total	20,603,448	20,290,549

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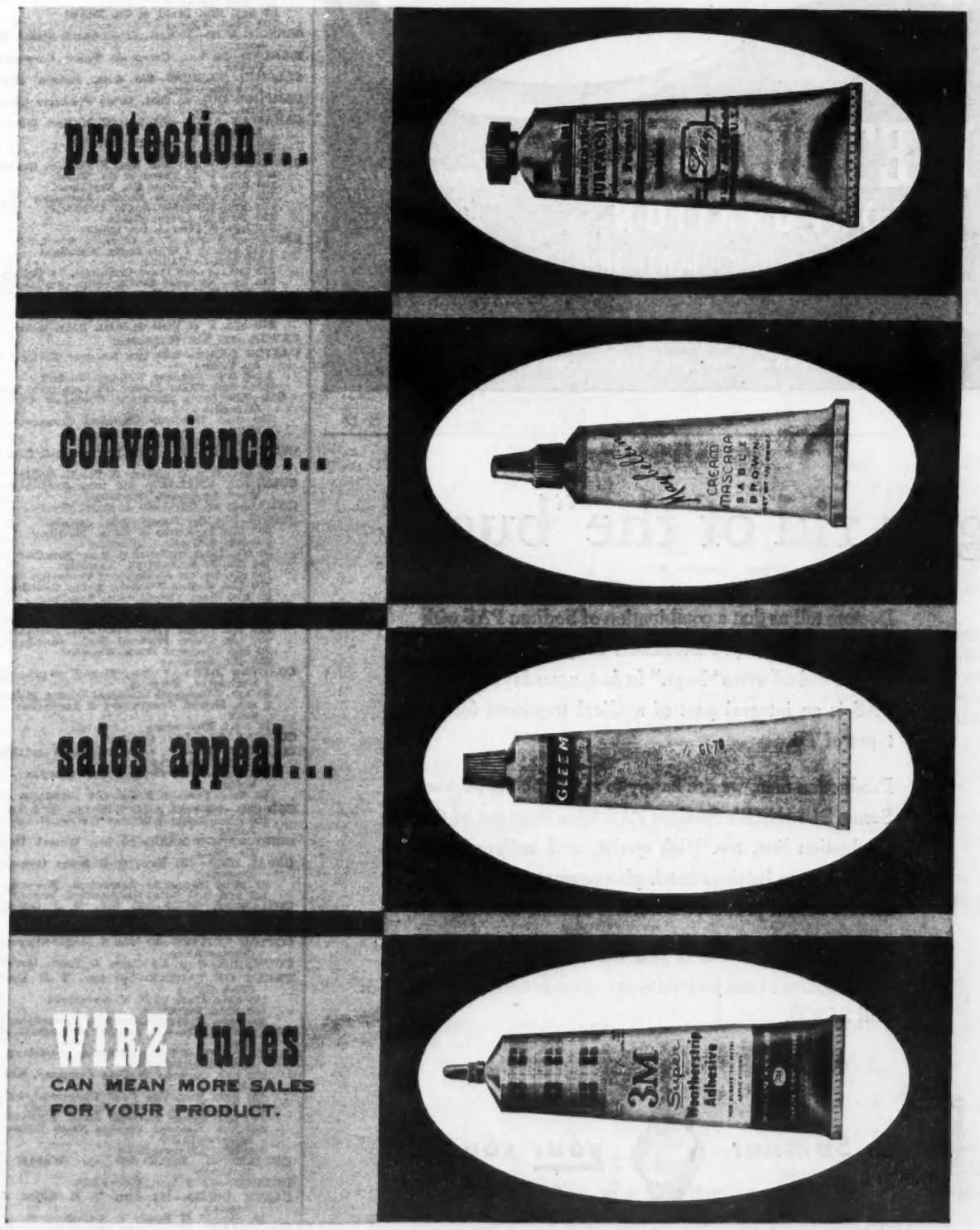

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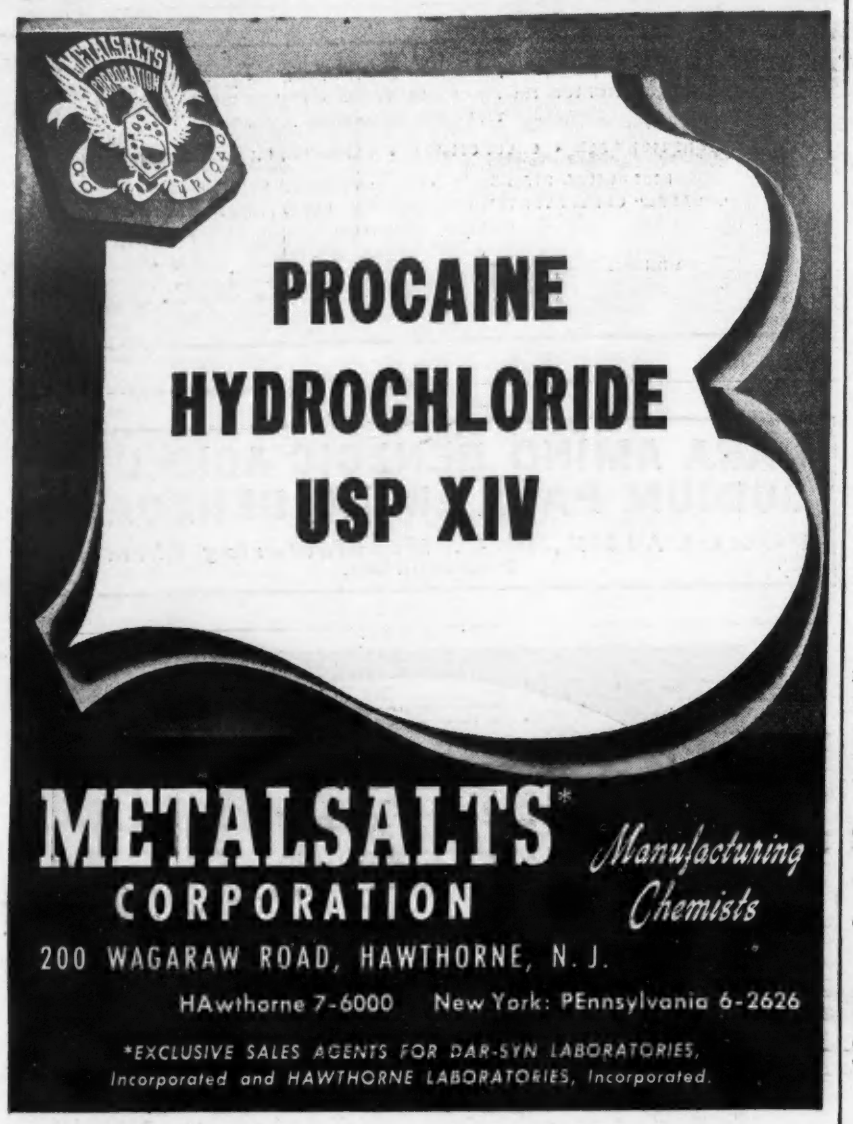

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CARBONATE—10 dms, Glasgow
ANILINE DYES—49 dms, C A Haynes, Hamburg
21 dms, Sandoz Chemical Works, Havre
ANISE SEED—220 bgs, Louis Furth, Vera Cruz
100 bgs, Malaga
ANNATTO SEED—100 bgs, Marcel Calvet, Puna
88 bgs, Callao
ANTIMONY REGULUS—19 cks, Indussa Corp, Antwerp
ARABIC GUM—102 bgs, Bank of N Y, Port Sudan
553 bgs, National City Bank, Port Sudan
201 bgs, Chase National Bank, Port Sudan
600 bgs, Hanover Bank, Port Sudan
ARROWROOT FLOUR—17 bgs, Manhattan Paste & Glue Company, Itajai
ASBESTOS FIBER—6,000 bgs, Johns Manville Corporation, Lourenco Marques
80 bgs, Asbestos Corporation of America, Durban
704 bgs, Johns Manville Corporation, Durban
417 bgs, Johns Manville Corporation, Port Elizabeth
4,440 bgs, Johns Manville Corporation, Capetown
40 bgs, Phoenix Shipping Company, Bremen
130 bgs, Durban
ATROPINE METHYLNITRATE—1 cs, European Chemical Company, Southampton
BALSAM—2 dms, Merchants Export & Import Company, Cutuco
BEESWAX—19 bgs, Gillespie & Co, Port au Prince
8 bgs, Curacao Trading Co, Jacmel
30 bgs, Ciudad Trujillo
35 bgs, Porcella Vicini & Co, Ciudad Trujillo
34 bgs, Curacao Trading Co, Ciudad Trujillo
101 bgs, Tampico
58 bgs, Wm Diehl & Co, Beirut
108 pkgs, Lisbon
BENZOIC ACID—20 dms, Freedman & Slater, Hamburg
BISMUTH—39 bxs, Cerro de Pasco Corporation, Callao
CALCIUM SILICIDE—164 dms, Judson Sheldon Division, Genoa
CAMPHOR OIL—25 dms, Orbis Products Corporation, Kobe
CARAWAY SEED—100 bgs, C M Van Sillevoldt, Rotterdam
200 bgs, A Gronowitz, Rotterdam
200 bgs, Rotterdam
CARNAUBA WAX—626 bgs, F Henjes, Tutoia
563 bgs, W R Grace & Co, Tutoia
168 bgs, J E Souza Co, Fortaleza
125 bgs, Smith & Nicols, Fortaleza
770 bgs, Gillespie & Co, Cabedello
729 bgs, D Levin, Bahia
375 bgs, A Derr & Co, Bahia
CASEIN—240 bgs, P A Dunkel, Auckland
1,642 bgs, A J Mills & Co, Auckland
1,401 bgs, La Pallice
375 bgs, Irving Trust Company, La Pallice
934 bgs, National Casein Sales, Auckland
94 bgs, F H Paul & Stein Bros, Wellington
1,600 bgs, A J Mills & Co, Wellington
400 bgs, Borden Co, Buenos Aires
215 bgs, F H Paul & Stein Bros, Oslo
CASSIA—435 bls, Rotterdam
CASTOR BEANS—392 bgs, Spencer Kellogg, Port Au Prince
1,198 bgs, Spencer Kellogg, Jacmel
3,385 bgs, Baker Castor Oil Company, Bahia
OIL—230 tons, Hardesty Chemical Company, Marseille
159 tons, Hardesty Chemical Company, Bombay
250 tons, Recife
CELERY SEED—50 bgs, H Marmorek & Son, Marseille
20 bgs, Wm M Allison & Co, Marseille
CHESTNUT EXTRACT—610 bgs, American Dyewood Company, Marseille
CITRAL—2 cs, Lo Curto & Funk, Havre
CLOVE—760 bls, Fuerst Bros, Zanzibar
500 bls, Lo Curto & Funk, Zanzibar
200 bls, A G Dinn, Zanzibar
50 bls, First National Boston, Zanzibar
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200 bls, Irving Trust Company, Zanzibar
600 bls, Chase National Bank, Zanzibar
50 bls, Chemical Bank, Zanzibar
200 bls, Zanzibar
COALTAR DYES—2 dms, Hensel Bruckmann & Lorbacher, Bremen
80 kgs, Cincinnati Chemical Works, Rotterdam
1 dm, Hensel Bruckmann & Lorbacher, Hamburg
11 cans, Rotterdam
COCHINEAL—6 bgs, Cadiz
COCONUT OIL—555 tons, Pacific Vegetable Oil Corporation, Manila
310 tons, American Trust Company, Zamboanga
30 dms, Procter & Gamble Company, Manila
COD OIL—100 dms, Atlas Refinery, St Johns
100 dms, Reilly Whitman Walton Company, St Johns
CONDURANGO BARK—20 bls, Wessel Duval & Co, Paita
COPAL GUM—428 bkts, O G Innes Corporation, Macassar
44 bkts, Internatio Rotterdam, Macassar
163 bgs, O G Innes Corporation, Matadi
CORIANDER SEED—200 bgs, M J Golombeck, Casablanca
200 bgs, Louis Furth, Casablanca
COTTON LINTERS—97 bls, A Siegle Corporation, Buenos Aires
COUMARIN—2 cs, Lo Curto & Funk, Havre
CREAM OF TARTAR—300 bgs, T M Duche & Sons, Genoa
145 bbls, Bank of N Y, Barcelona
100 bbls, Barcelona
300 bbls, Nylos Trading Co, Rotterdam
CRESYLIC ACID—403 dms, H A Gogarty, Liverpool
CUMIN SEED—576 bgs, Hismoco American Company, Khorramshahr
384 bgs, Curacao Trading Company, Khorramshahr
100 bgs, Max Van Pels, Khorramshahr
277 bgs, Louis Furth, Khorramshahr
480 bgs, Chase National Bank, Khorramshahr
529 bgs, General Foreign Sales Corporation, Khorramshahr
600 bgs, Khorramshahr
CUTTLEFISH BONE—100 cs, Wagner Bros, Portimao
DEXTRIN—1,370 bgs, Rotterdam
EARTH COLOR—450 bgs, T H Deutz & Co, Bremen
10 cks, T H Deutz & Co, Bremen
ERGOSTEROL—2 cs, Terra Chemicals Inc, Bremen
EUCALYPTUS OIL—11 dms, Corn Exchange Bank, Seville
EUPHORBIA—30 bls, S B Penick & Co, Tuticorin
FISHLIVER OIL—4 dms, Vitamins Inc, Yokohama
3 dms, Yokohama
FUEL OIL—138,369 bbls, Metropolitan Petroleum Corp, Punta Cardon
284,603 bbls, Esso Standard Oil Co, Aruba
104,351 bbls, Paragon Oil Co, Tampico
109,535 bbls, Hess Inc, Puerto La Cruz
113,624 bbls, Hess Inc, Punta Cardon
10,000 bbls, Asiatic Petroleum Corp, Curacao
94,403 bbls, Public Service Terminal, Curacao
GALBANUM GUM—29 dms, Meer Corp, Khorramshahr
56 bbls, Meer Corp, Khorramshahr
5 bgs, Meer Corp, Khorramshahr
GELATIN—204 bgs, Hensel Bruckmann & Lorbacher, Rotterdam
1 dm, D H Burdett, London
GERANIUM OIL—13 dms, Irving Trust Co, Algiers
4 dms, Brown Bros, Algiers
8 cs, Magnus Mabee & Reynard, Alexandria
1 dm, George Lueders & Co, Mombasa
GLYCERINE—299 tons, Procter & Gamble Co, Manila
100 tons, Calcutta
GUAIACWOOD OIL—39 cs, Schimmel & Co, Buenos Aires
34 cs, Fritzsche Bros, Buenos Aires
GYPSUM—2,920 tons, Newark Plaster Co, Walton
HOOF AND HORN MEAL—548 bgs, Wessel Duval & Co, Buenos Aires
HORNMEAL—791 bgs, Manufacturers Trust Co, Rijeka
HYROXYCITRONELLAL—5 cs, Lo Curto & Funk, Havre
HYDROXYCYCLOHEXYL HYDROPEROXIDE — 30 cs, Dyson Shipping Co, Rotterdam
INDIGO—212 dms, C A Haynes, Hamburg
IPECAC ROOT—10 bgs, S B Penick & Co, Cristobal
IRON CARBONYL—54 dms, Caldwell & Co, Antwerp
KAURI GUM—82 bgs, S Winterbourne & Co, Auckland
LABDANUM GUM—16 bbls, Chase National Bank, Tarragona
LACTOSE—50 bgs, Rotteram
25 dms, Rotterdam
LAUREL LEAVES—52 bls, Piraeus
LAVENDER FLOWERS—61 bls, S B Penick & Co, Marseille
LAVENDER OIL—5 dms, Gane & Ingram, Marseille
LICORICE ROOT—370 bls, Irving Trust Co, Piraeus
LIME OIL—2 dms, Lo Curto & Funk, Vera Cruz
LIVERMEAL—500 bgs, H J Baker & Bro, Auckland
541 bgs, Armour & Co, Montevideo
LOCUST BEAN GUM—350 bgs, Hanover Bank, Valencia
150 bgs, T M Duche & Sons, Genoa
100 bgs, Hanover Bank, Barcelona
800 bgs, Morningstar Nicol, Piraeus
200 bgs, Guaranty Trust Co, Rotterdam
50 bgs, Rotterdam
MACE—20 cs, Karl H Landes & E Balint, Penang
14 cs, Internatio Rotterdam, Macassar
30 cs, Karl H Landes & E Balint, Macassar
16 cs, Hamburg
MAGNESITE—6,380 bgs, Golwynne Chemical Corp, Madras
MANGROVE BARK—1,750 bgs, River Plate Corp, Tumaco
MARJORAM—200 bgs, TransAmerican Mercantile Corp, Arica
75 bgs, Levy & Levis Co, Marseille
MERCURIC POTASSIUM IODIDE—1 cs, European Cnemical Co, Southampton
MERCURY—250 btls, J H Schroder, Leghorn
50 flks, Cosmos Shipping Co, Trieste
600 flks, Cadiz
10 flks, Vera Cruz
MOLASSES—1,000 tons, W R Grace & Co, Salaverry
MONTAN WAX—70 bgs, Wax & Rosin Products, Hamburg
600 bgs, Wax & Rosin Products, Bremen
44 bgs, Rotterdam
MUSTARD SEED—300 bgs, C Gulden, Naples
108 bgs, V A Cordovi, Hamburg
MYRRH GUM—160 bgs, Aden
NAPHTHALENE—302 bgs, Rotterdam
m-NITRO-p-TOLUIDINE — 4 dms, Filo Color & Chemical Co, Rotterdam
NUTMEGS—470 bgs, Rotterdam
OCOTEA CYMBARUM OIL—22 dms, Givaudan Corp, Itajai
OLIVE OIL—10 dms, Atlantic Bank of N Y, Tarragona
375 dms, Balbo Oil Corp, Tarragona
200 dms, Manufacturers Trust Co, Algiers
225 dms, National City Bank, Algiers
210 dms, Chase National Bank, Malaga
11 dms, National City Bank, Malaga
25 dms, Hanover Bank, Tarragona
105 dms, Bank of America, Seville
285 dms, Manufacturers Trust Co, Seville
80 dms, Bank Mercantile Trust Co, Seville
175 dms, Credit Suisse, Seville
55 dms, Chase National Bank, Seville
25 dms, National City Bank, Seville
131 dms, Manufacturers Trust Co, Malaga
269 dms, Credit Suisse, Malaga
50 dms, National City Bank, Barcelona
85 dms, National City Bank, Barcelona
50 dms, Chemical Bank, Barcelona
25 dms, Atlantic Bank of N Y, Seville
526 dms, Credit Suisse, Algiers
122 dms, J H Schroder, Algiers
25 dms, Import Oil Co, Algiers
150 dms, Barcelona
880 dms, Cadiz
95 dms, Seville
ORANGE OIL—1 dm, Citrus & Allied Essential Oil Co, Puerto Plata
PALM OIL—483 tons, Balfour Guthrie, Matadi
KERNEL OIL—260 tons, Ango Ango
172 tons, Matadi
PAPAIN—40 cs, D & S Chemical Corp, Mombasa
77 cs, Chas L Huisking & Co, Mombasa
24 crts, Chas L Huisking & Co, Mombasa
45 cs, East Asiatic Co, Dar es Salaam
4 cs, Smith Coney & Barrett, Dar es Salaam
23 cs, National City Bank, Dar es Salaam
102 cs, Meer Corp, Colombo
42 cs, Chas L Huisking & Co, Tanga
54 cs, Mombasa
PAPRIKA—400 bgs, A A Sayia, Alicante
300 bgs, P H Petry, Alicante
75 bgs, J Weinstein, Alicante
20 cs, J Weinstein, Alicante
100 bgs, Griffith Lab, Alicante
900 bgs, Alicante
PATCHOULI LEAVES—156 bgs, L A Champon & Co, Mombasa
PEATMOSS—3,450 bls, Premier Peatmoss Corp, Bremen
750 bls, C Fafard, Bremen
900 bls, E Dunwoody, Bremen
PECTIN—53 kgs, Jafbro Corp, Copenhagen
10 kgs, Jafbro Corp, Gothenburg
PEPPER, BLACK—61 bgs, Mincing Trading Corp, Oosthaven
2,640 bgs, Borneo Sumatra Trading Co, Oosthaven
122 bgs, Internatio Rotterdam, Oosthaven
40 bgs, Mutual Spice Co, Oosthaven
60 bgs, Internatio Rotterdam, Kuching
160 bgs, A G Dunn, Oosthaven
RED—505 bgs, Wm E Martin, Iskenderun
250 bgs, H Badenhop Corp, Ismir
100 bgs, Irving Trust Co, Iskenderun
701 bgs, Joensson & Cross, Iskenderun
300 bgs, H Badenhop Corp, Iskenderun
305 bgs, M J Golombeck, Iskenderun
202 bgs, Wm M Allison & Co, Iskenderun
150 bgs, Alicante
PETITGRAIN OIL—32 dms, Ungerer & Co, Buenos Aires
10 dms, Fritzsche Bros, Buenos Aires
36 dms, Lo Curto & Funk, Buenos Aires
22 dms, Wessel Duval & Co, Buenos Aires
10 dms, Magnus Mabee & Reynard, Buenos Aires

PETROLEUM, CRUDE—200,000 bbls, Esso Standard Oil Co, Puerto La Cruz
165,864 bbls, Esso Standard Oil Co, Las Piedras
145,000 bbls, Socony Vacuum Oil Co, Puerto La Cruz
POLLACKLIVER OIL—30 dms, Consumers Import Co, Yokohama
65 dms, Vitamins Inc, Yokohama
30 dms, Arista Oil Products Co, Yokohama
100 dms, E F Drew & Co, Yokohama
POLYISOBUTYLENE—20 dms, Nova Chemical Hamburg
POLYVINYL CHLORIDE—2,200 bgs, Venice
8,000 bgs, Naples
POPPYSEED—100 bgs, P H Petry, Rotterdam
150 bgs, C M Van Sillevoldt, Rotterdam
200 bgs, Levy & Levis Co, Rotterdam
614 bgs, A Gronowitz, Khorramshahr
700 bgs, Rotterdam
2,376 bgs, Khorramshahr
POTASSIUM PERCHLORATE—95 bbls, Chilean Nitrate Sales Corp, Antofagasta
SILICATE—1,800 bgs, Sylvania Electric Products, Rotterdam
PYRETHRUM EXTRACT—30 dms, McLaughlin Gormley King Co, Mombasa
FLOWERS—125 bls, Prentiss Drug & Chemical Co, Dar es Salaam
QUEBRACHO EXTRACT—1,000 bgs, International Products Corp, Buenos Aires
1,496 bgs, River Plate Corp, Buenos Aires
1,693 bgs, First National Bondex, Buenos Aires
QUINCESEED—59 bgs, Khorramshahr
RADIUM ELEMENT—2 cs, Radium Chemical Co, Antwerp
RAUWOLFIA SERPENTINA BARK—1 cs, Meer Corp, Antwerp
RED IRON OXIDE—100 bbls, Reichard Coulston, Malaga
50 bbls, Whittaker Clark & Daniels, Malaga
241 bbls, Whittaker Clark & Daniels, Malaga
RICE, STARCH—100 bgs, Aurora Manufacturing Co, Trieste
SAGE LEAVES—382 bls, W A Lee Co, Hamburg
289 bls, Amersped Inc, Hamburg
11 bgs, P G Sofos, Piraeus
73 bls, Piraeus
SULFAPYRIDINE SALICYLATE — 25 dms, Pharmacia Lab, Gothenburg
SANDALWOOD OIL—3 cs, Magnus Mabee & Reynard, London
34 cs, Magnus Mabee & Reynard, Madras
9 cs, George Lueders & Co, Madras
SASSAFRAS OIL, ARTIFICIAL—25 dms, Givaudan Corp, Kobe
SEEDLAC—50 bgs, Benham Import Corp, Bangkok
250 bgs, Borneo Sumatra Trading Co, Bangkok
50 bgs, Wm Zinsser & Co, Calcutta
200 bgs, Colony Import & Export Corp, Calcutta
100 bgs, Calcutta
SENNA LEAVES—58 bls, Irving Trust Co, Port Sudan
SERPENTINA ROOT—2,692 bgs, Ciba Pharmaceutical Products, Matadi
SESAME SEED—250 bgs, Louis Furth, Corinto
150 bgs, R J Spitz, Corinto
200 bgs, Archibald & Kendall, Corinto
HULLED—500 bgs, Wm G Scarlett, Corinto
SHARKLIVER OIL—50 dms, Consumers Import Co, Yokohama
SIENNA—26 cks, Reichard Coulston, Leghorn
SILICON CARBIDE—40 bgs, Phoenix Shipping Co, Bremen
METALLIC—60 bbls, Miny Corn, Venice
SOAP BARK—36 bls, Prentiss Drug & Chemical Co, San Antonio
SODIUM AMINO SALICYLATE—50 dms, Intermaritime Forwarding Co, Havre
ARSENATE—72 dms, Harry Dixon & Sons, Glasgow
STARCH—1,000 bgs, Rotterdam
STYRAX OIL—129 cs, Izmir
SULFATHIAZOLE—3 dms, Cyanamid Inter-American Corp, Buenaventura
TALC—20,587 bgs, Charles Mathie, Genoa
TAPIOCA—170 bgs, Catz American Co, Tirebon
FLOUR—1,000 bgs, American Key Products, Bangkok
2,000 bgs, Morningstar Nicol, Itajai
TARTARIC ACID—200 bgs, Nylos Trading Co, Genoa
TETRA-ALKYLTHIOPROPHOSPHATE — 21 cbys, Plant Products Corp, Rotterdam
THALLIUM SULFATE—6 cs, Hudson Shipping Co, Marseille
TRAGACANTH GUM—50 cs, A M Iran Corp, Khorramshahr
86 cs, Sherkat Amiran, Khorramshahr
22 cs, P A Dunkel, Khorramshahr
76 bgs, Meer Corp, Khorramshahr
8 cs, Khorramshahr
TRICHLOROETHYLENE—62 dms, Hanover Bank, Venice
500 dms, Venice
TUNG OIL—100 tons, Borneo Sumatra Trading Co, Buenos Aires
260 tons, Onyx Oils & Resins Inc, Buenos Aires
316 tons, Bunge Corp, Buenos Aires
300 tons, Buenos Aires
UREA—1,600 bgs, Nylos Trading Co, Genoa
VANILLA BEANS—83 cs, Camex Co, Vera Cruz
10 cs, F Huber & Co, Semarang
WATTLE BARK—1,986 bls, Hammond & Carpenter, Durban
EXTRACT—425 bgs, River Plate Corp, Mombasa
WHITING—1,200 bgs, N H Weitzner, Antwerp
1,000 bgs, Antwerp
WOOL GREASE—100 dms, Hummel Chemical Co, Bremen
YERBA MATE—1 cs, Pacific International Corp, Buenos Aires
ZINC OXIDE—55 bls, H A Gogarty, Antwerp

Baltimore

SESAMESEED, HULLED—100 bgs, W R Grace & Co, Corinto

Boston

COTTON LINTERS—43 bls, Wonalancet Co, Callao
106 bls, Callao

Los Angeles

CORIANDER SEED—100 bgs, B C Ireland Inc, Casablanca
COPRA—500 long tons, American Trust Co, Dumaguete
CAKE—2,000 bgs, Internatio Rotterdam, Cebu
1,000 bgs, Balfour Guthrie & Co, Cebu
EARTH COLOR—1,665 bgs, Bremen
PEAT MOSS—500 bls, Downey, Bremen
500 bls, East Asiastic Co Inc, Bremen
300 bls, H & H Distributing Co, Bremen
250 bls, John Schumacher Co, Bremen
750 bls, Nurserymen's Exchange, Bremen
POLLACKLIVER OIL—200 dms, Interocean Chemical & Mineral Corp, Yokohama
55 dms, Albumina Supply Co, Yokohama
103 dms, Universal Foreign Service Co, Yokohama
POPPY SEED—140 bgs, Seed & Feeding Corp, Buenos Aires
QUEBRACHO EXTRACT—1,000 bgs, International Products Corp, Buenos Aires
1,660 bgs, River Plate Corp, Buenos Aires
TAPIOCA FLOUR—1,000 bgs, Stein, Hall & Co, Bangkok
TUNG OIL—120 tons, Pacific Vegetable Oil Corp, Buenos Aires

Philadelphia

ASBESTOS FIBER—4,230 bgs, Keasby & Mattison, Beira
FUEL OIL—66,109 bbls, Paragon Oil Co, Tampico
GYPSUM—6,851 tons, U S Gypsum Co, Hantsport
MENTHOL—193 cs, Muller Shipping Co, Amsterdam
NAPHTHALENE—500 bgs, Fallek Products Co, Antwerp
1,000 bgs, Morris Friedman Co, Rotterdam
PEATMOSS—1,000 bls, Premier Peatmoss Corp, Bremen
PETROLEUM, CRUDE—107,351 bbls, Atlantic Refining Co, Las Piedras
210,854 bbls, Atlantic Refining Co, Amuay Bay
146,610 bbls, Atlantic Refining Co, Pamatacual
116,853 bbls, The Texas Co, Covenas
287,276 bbls, Gulf Oil Corp, Mena Al Ahmadi
190,265 bbls, Socony Vacuum Oil Co, Mena Al Ahmadi
248,965 bbls, Cities Service Oil Co, Mena Al Ahmadi
WATTLE BARK—500 bls, Mossel Bay

San Francisco

ASBESTOS FIBER—1,680 bgs, Lourenco Marques
800 bgs, Keasby & Mattison, Lourenco Marques
1,120 bgs, Keasby & Mattison, Beira
800 bgs, Durban
CLOVE—100 bgs, B C Ireland, Durban
CORIANDER SEED—100 bgs, B C Ireland, Casablanca
DEXTRIN—20 bgs, Pacific Glue Manufacturing Co, Rotterdam
MACE—14 cs, Catz American Co, Belawan Deli
MOLASSES—10,344 tons, Kaihsiung
NAPHTHALENE—100 bgs, P W Bellingall, Antwerp
NICKEL SULFATE—100 bgs, P W Bellingall, Bremen
PEATMOSS—500 bls, H M Newhall, Bremen
500 bls, Trans Sphere Trading Corp, Bremen
1,360 bls, Nurserymens Exchange, Bremen
PEPPER, BLACK—640 bgs, Singapore
PETROLEUM, CRUDE—165,049 bbls, The Texas Co, Sungai Pakning
POPPY SEED—100 bgs, Ziel & Co, Copenhagen
UREA—200 tons, Rocca Cuvi Inc, Otaru
WOOL GREASE—50 dms, N I Malmstrom, Hull

Obituaries

Dr. Richard H. Patch

Dr. Richard H. Patch, vice-president in charge of operations, and a member of the board of directors of E. F. Houghton & Co., Philadelphia, died November 13 in Hot Springs, Ark. He was sixty-six years old. Dr. Patch was also executive vice-president of E. F. Houghton & Co. of Canada, Ltd., and treasurer of Houghton Vix-Syn Company, Hopkins, Minn.

Reuben P. Resor

Reuben P. Resor, treasurer of Standard Oil Company of New Jersey from 1935 until his retirement in 1938, died recently in New York. He was eighty-one years old. Mr. Resor had been associated with various Standard Oil affiliates for forty-nine years.

William D. Shill

William D. Shill, long dean of chemical salesmen in the Philadelphia area, died November 17 at the age of eighty-three. At the time of his retirement in 1951 from General Chemical Division, Allied Chemical & Dye Corporation, New York, Mr. Shill had been active in the chemical industry for more than fifty-five years.

Mr. Shill started his career as a shipping clerk with the Moro-Phillips Chemical Company in Camden, N. J., and joined General in 1899 when Moro-Phillips became part of the newly-formed General Chemical Company. Shortly after World War I he became a General Chemical sales representative serving the textile and allied industries, and for the next thirty years he took an active part in the chemical industry in and around Philadelphia.

Leonard Wallach

Leonard Wallach, president of Wallach-Gracer Export Corporation, New York, died recently. He was forty years old. Mr. Wallach's company represents many large chemicals producers abroad.

Ray E. Miller, formerly director of sales of the petroleum chemical division of E. I. duPont de Nemours & Co., Wilmington, Del., died last week in New York. He was fifty-eight years old. Mr. Miller, who resigned the sales post last year, continued with duPont as adviser to the petroleum chemical division of the organic chemical market.

James H. Ostberg, retired secretary-treasurer of the former Primrose House, died November 10 in New Rochelle, N. Y. He was eighty years old.

Lewis Ryers Thompson, seventy-one, former assistant surgeon-general of the Public Health Service, died November 12 in Baltimore, Md. Dr. Thompson was seventy-one years old.

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Potassium phosphate, 200 25-lb. units, reagent, dibasic, anhydrous, inv. 68, Dec. 2. Contracting Officer, Camp Detrick, Frederick, Md.

Sodium hydroxide, 546,000 lbs., tech., inv. CML-30-070, Dec. 3. N. Y. Chem. Procurement District, 180 Varick St., N. Y., N. Y.

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Phenylacetic acid undergoes anhydride formation, chlorination to the acid chloride, esterification, amidation, in the normal manner of an organic acid.

$C_6H_5CH_2COOH + C_6H_5CHO$ (benzaldehyde) —catalyst→ $C_6H_5CH = C(C_6H_5)COOH + H_2O$ (α-phenylcinnamic acid)

$C_6H_5CH_2COONa$ (sodium phenyl acetate) $+ C_6H_5(OH)COCH_3$ (o-hydroxy-acetophenone) —catalyst→ $C_6H_4OCOC(C_6H_5) = C(CH_3) + NaOH + H_2O$ (3-phenyl-4-methyl coumarin)

$C_6H_5CH_2COOH + 3H_2$ —catalyst→ $C_6H_{11}CH_2COOH$ (cyclohexylacetic acid)

(*Varied conditions will give phenylacetaldehyde*)

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Diamond Advances Five At Muscle Shoals Plant

Recent appointments of five employees of Diamond Alkali Company, Cleveland, Ohio, to supervisory posts at its Muscle Shoals, Ala., chlorine-caustic soda plant have been announced by Steve Puschaver, works manager. Those promoted, and their new positions, are:—Gene W. Noce, production supervisor; William C. Mahan, purchasing agent; Richard J. Blaha, area supervisor; William M. Ahlstrom, jr., maintenance supervisor, and George R. Digby, supervisor of stores.

Transferring from Diamond's Deer Park plant at Houston, Tex., where he was technical superintendent, Mr. Noce has been with the company there since 1948. Joining Diamond as assistant chemist, Mr. Noce also held the positions of chief chemist, chlorine foreman, and assistant chlorine superintendent prior to his present promotion. Mr. Mahan has been assistant purchasing agent at Diamond national headquarters in Cleveland. He joined the company in 1925 in a secretarial capacity. Mr. Blaha was an engineer at Diamond's research center in Painesville, Ohio, before his new appointment. He joined Diamond in 1951 as an engineer in development.

Mr. Ahlstrom had been with the Diamond research center, where he was an engineer. He joined the company as an engineer in development in 1950. Mr. Digby, a Diamond employee since 1935, was a foreman in the yard department at the Painesville works prior to this appointment. He worked in various departments before being promoted to the post of assistant safety supervisor in 1947. Placed in charge of stores at the government-owned Diamond magnesium plant during its re-activation from 1951-1953, he subsequently became a foreman.

Rayonier Tree Chemical

—Continued from page 5

cific coast and southwest oil fields showed that "Rayflo" fully lived up to expectations," the company said. The new chemical, it was said, improves the consistency of drilling mud used to lubricate the bit and to carry cuttings to the surface. It reportedly has proved most effective in wide ranges of both high and low pH.

"Rayflo" is the first non-cellulose product commercially developed by Rayonier from the logs of trees. Until now almost 50 percent of the "sylvan," or tree chemicals, had been considered waste. But scientists believed they could realize a great, untapped wealth due to the unique characteristics of the organic compounds found only in trees. Dr. Lovell said that scientists refer to Rayflo as a "complex, polymeric polyphenol." The company can produce tremendous quantities of it from the bark of the same logs used for chemical cellulose production.

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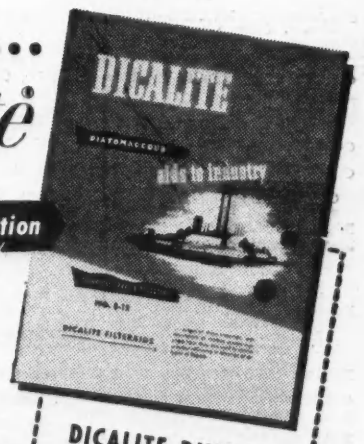

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Essential Oils, Aromatics, Flavorings

Coumarin prices advanced 25 cents per pound last week in the first price change in more than a year. In the essential oils market all price changes were upward. With the exception of the citrus group, and a few other oils, prices in this market have been trending upward. Cedarleaf oil prices advanced 15 cents per pound for spot sale. Very little oil was reportedly produced in country areas this past season since the labor normally involved in this work turned to more remunerative employment in construction work under way in production regions. Supplies were judged insufficient to cover anticipated requirements until next Spring even if good weather conditions make added production possible, it was said.

Cinnamon leaf oil has advanced considerably on spot, with last week's spot market up 50 cents over previous levels. Production of this oil has been drastically curtailed at origin and it appeared that the supply situation would probably worsen as existing stocks dwindle. The diversion of labor to more profitable crops such as coffee and vanilla has had a serious effect upon cinnamon leaf oil production in addition to adverse weather conditions at origin, it was noted. USP quality clove bud oil was also significantly higher, on spot, for resons paralleling those given for cinnamon leaf oil. The spot market was advanced 50 cents.

Steady demand for peppermint oil plus the realization that the yield of high test oil this year was apparently below anticipated levels have combined to strengthen spot prices considerably. It was expected that the market would continue to hold at firm levels for some time. Spearmint oil prices, in contrast, continued soft. There has been some swing to spearmint by consumers who blend it with much higher priced peppermint oil but overall demand has weakened further, according to trade sources. The citrus oils were in more than adequate supply and pricewise, weak. Orange and lime oils, were perhaps the softest, pricewise, with lemon oil easy.

In the seeds and spices market there were some notable changes. The lack of sufficient spot stocks was reported to have driven prices on nutmeg and mace higher. Dutch caraway seed was notably stronger while items to decline included white and black pepper in addition to clove, cinnamon and two grades of poppy seed.

Price Trends

Advanced

Caraway seed, Dutch, 1¼c. per lb.
Coumarin, 25c. per lb.
Mace, East India, 10c. per lb.
Nutmeg, East India, 1c. per lb.
Oil, cedarleaf, 15c. per lb.
Cinnamon leaf, 50c. per lb.
Clove, USP, 50c. per lb.

Reduced

Cinnamon, Ceylon, #2, 1c. per lb.
Clove, Madgascar, 1c. per lb.
Zanzibar, 5c. per lb.
Mustard seed, Danish, ½c. per lb.
Pepper, black, Malabar, 5c. per lb.
white, 3c. per lb.
Poppy seed, Argentine, 3c. per lb.
Turkish, 3c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
138.70	138.58	138.54	145.75

(For Current Prices see page 9)

Essential Oils

Cedarleaf—The spot market advanced 15c. per pound last week, reflecting higher shipping costs. The supply situation was growing tighter and demand remained unchanged. The heaviest production season for this domestic oil is about over and there has not been enough made to satisfy the normal demand. Very little oil was produced in the country districts this season for a variety of reasons, but primarily it appears as if road construction work was more attractive to the people who normally produce cedarleaf oil than making it at prices that were ruling last season. At present supplies are insufficient to cover normal requirements until next Spring even if good weather brings about some added production during the next month. Current prices ranged from $2.65 to $3 per pound, depending upon quantity and source.

Cedarwood—The supply situation continued bad with little prospects of any improvement in the near future, according to trade sources consulted. Prices were very firm and tending to go higher although contract prices are being maintained.

Cinnamon Leaf—Production of Ceylon cinnamon leaf oil has been drastically reduced because of crop conditions and also because of the low prices which have ruled for the past year. Although the market has advanced about 75 percent from the low point, there is, as yet, no evidence of an increase in production. Supplies are low, and current prices are substantially higher, advancing 50c. over previous levels. The market ranged from $1.75 to $2.25 per pound.

Citronella—The spot market continued very firm in face of sustained demand and a shortage in supply. There appeared to be little possibility of improvement in supply in the near future, according to trade reports. Formosa was said to have oversold on this year's crop and the military situation there, with that island in imminent danger of being invaded by the Red Chinese, has tended to have an inflationary effect upon market prices. As for Guatemala, limited production of citronella oil has been started but anything like a return to full production levels was not expected until well into 1955 as a result of the damage to the plantations both from neglect and from the ravages of the civil war fought there, earlier this year.

The current market price of Ceylon citronella oil ranged from $1.25 to $1.75 per pound. Formosan and Java qualities ranged from $1.35 to $1.75 per pound.

Clove—USP clove oil was noted to have strengthened considerably, on spot. The current market ranged from $3.75 to $4.60 per pound and low priced offerings were approximately 50c. higher than previously reported.

Geranium—The spot market for Bourbon geranium oil has gotten definitely stronger, and while a great deal of low quality material is being shipped in from France, the genuine product is not in large supply. The summer crop in the island of Reunion was, for all practical purposes, a complete failure. While formerly this crop is only one-third the size of the winter yield, it has had the faculty, during the past few years, of balancing the market. Without it, somewhat higher prices are anticipated, because very little oil from the winter harvest is left in the island. Cost of genuine oil today is at least $2 per pound higher than the market of two months ago, and pure oil is difficult to find. Algerian oil geranium is also in very tight supply and will probably be scarce in the immediate future. Production costs have run much higher than anticipated in Algeria and present sales prices are not very remunerative. While the producers actually do not want to see the price go too high, on the chance that it may discourage consumption, they do feel that the oil should sell for at least $3 per pound higher.

The current market ranged from $10.50 to $12.25 on Algerian quality and from $11.25 to $14.50 on the Bourbon oil.

Lavender—The spot market continued very firm last week although there were no further price increase noted. The high level to which market prices have ascended has had a somewhat dampening effect upon inquiry, it was noted.

Lemon—The market was unchanged. Prices were steady and supplies more than ample for current inquiry.

Lemongrass — There has been an apparent halt to the price spiral which has charcterized this market in recent weeks. Currently lemongrass oil was very firm at $2.50 to $3.25 per pound.

Peppermint — The market continued very firm in peppermint oil. It appeared likely that prices would start to advance again, in face of the reports coming in from the country on this year's total production. It was expected that when consumers fully realize that this year's yield was below earlier expectations, as now claimed, that demand pressure would drive the market higher.

Petitgrain—Spot prices were very firm and might possibly advance higher in view of recent reports from Paraguay. One such report read as follows:—"Following extremely unfavorable weather conditions last winter and even this spring (June to October 1954), production was practically nil. The plantations did not grow normally and work in the field as well as communications was constantly interrupted. The weather has improved and because of high prices the planters are collecting as much raw material as possible. This early

For Late Market Developments, See Page 4

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picking did not leave sufficient time for the tree and plant material to mature. As a result the petitgrain oil being distilled now from young tender leaves has a low percentage of linalyl acetate. Various producers are also distilling not only young leaves but also twigs which results in a trace of ethyl alcohol.

Arrivals from distilling areas are increasing and will probably further increase during November, but the majority of the lots arriving are not suitable for exportation and are being rejected, at least by shippers of high test material.

There were further reports that some poor quality oil would be coming into this market since the high prices currently paid in the world market has attracted so-called "fly-by-night" exporters into the petitgrain oil market. Current quotations here were $4.25 to $5.30 per pound.

Aromatic Chemicals

Coumarin—In the first price change in over a year, the market price of coumarin was advanced 25c. per pound by several producers. The current price ranged from $3.10 to $3.45 per pound, depending upon quantity and producer. The increase applies to spot purchases with contract quotations due to rise, effective, January 1, 1955.

Miscellaneous

Caraway Seed—Spot quotations advanced last week reflecting firmer shipping prices at origin. The current market was 20c. per pound, an increase of 1¼c. per pound over previous quotations.

Cinnamon—Ceylon No. 2 cinnamon declined 1c. per pound, on spot, and was currently offered at 59c. to 61c. per pound. The "0000" grade was nominal, with no spot stocks reported available.

Clove—Spot stocks were reported small and consumption was expected to get a boost from the scarcity of pimento, according to some trade sources. Spot prices declined last week reflecting the attractive afloat prices quoted on Madagascars and Zanzibar cloves. Madagascar clove was 1c. lower at 58c. while Zanzibar clove was off 5c., being quoted at 63c.

Ginger—Spot ginger prices were reported unchanged but very firm. Increased consumption of ginger during the coming holiday season was expected and the market might conceivably go higher, depending upon the extent of inquiry.

Mace—Spot mace prices have advanced 10c. per pound on the East Indian material. Current prices ranged from $1.50 to $1.75 per pound. West Indian mace was much firmer but there were still some lots left at unchanged prices. The current market ranged from $1.40 to $1.45.

Mustard Seed—Spot prices on Danish mustard seed declined ½c. per pound last week and currently ranged from 12c. to 13c. per pound. Spot stocks of Dutch seed have been depleted and there have been no recent offers from origin, it was said.

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Montana yellow mustard was quoted at 13c. to 13½c., on a slightly firmer level.

Nutmeg—With supplies of East Indian grades disappearing, West Indian nutmegs were said to be attracting increased attention. Spot prices on East Indian nutmeg advanced 1c. per pound and were quoted at 46c. on both the whole and shrivels. Price movement of the West Indian material has been slight and the differential currently existing between the two grades was considered unrealistic in view of the situation. Afloat prices on West Indias were quoted at 32½c., which was 3c. higher than last quoted spot prices. Demand on the consumer level was said to be spurred by the proximity of the holiday season.

Pepper—The spot market had declined 5c. by late last week, Malabar pepper being quoted at 50c., reversing the trend of the previous week in a resumption of the downward course it had taken in weeks previous. While it was true that arrivals had been tapering off, the overall import total for this year was expected to be approximately 2,000 tons greater than 1953. Whether prices would continue to decline was a matter for conjecture but it appeared possible that the nadir had been reached and that the market might strengthen under the impetus of such factors as the possible dock strike at the end of this week. Consumption was expected to be good and inquiry should pick up, spurred by holiday buying.

Pimento—Spot prices remained unchanged but firm late in the week. The small allocation for November shipment by the government in Jamaica was reported to have resulted in a stampede for supplies with prices advancing considerably, at origin, as a result. It further appeared that Mexican pimento would continue tight.

Poppy Seed—Argentine and Turkish poppy seed was down 3c., on spot, last week, as increased arrivals resulted in lower market quotations. The current price was 27c. on both grades. Polish and Dutch seed were unchanged at 32c. and 33c., respectively.

Standard-Toch Sales Mgr., Harrie S. Bickford, Retires

Standard-Toch Chemicals, Inc., New York, has announced the retirement of Harrie S. Bickford as general sales manager and has appointed Louis G. Gordon sales manager of Toch Brothers Division. Mr. Bickford joined the then Standard Varnish Works at its Chicago plant in 1916. Mr. Gordon joined the firm in 1930 and was an executive in trade sales before his present appointment.

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National Paint, Varnish and Lacquer Association

66th Annual Meeting, Chicago, November 15–17

Federation Cleavage Move Explained

Why the Federation of Paint and Varnish Production Clubs has decided to go its own way, holding separate annual conventions from the National Paint, Varnish and Lacquer Association—at different times and in different cities—was explained last week by the outgoing federation president, Dr. Calvin J. Overmyer of Elliott Paint & Varnish Company, Chicago.

Dr. Overmyer, who was succeeded as FPVPC president by N. Newell Beckwith of Rinshed-Mason Company, Detroit, Mich., gave his explanation at the thirty-second annual meeting of the federation, which got under way November 18 at the Palmer House, Chicago, following the closing of the NPVLA conclave.

Noting that the decision to split off from NPVLA "was not hastily reached," Dr. Overmyer revealed that the decision revolved about the FPVPC board's feeling "that the needs of our expanding organization and membership can best be served by separate annual meetings."

Greater Flexibility Claimed

"This break with tradition," he went on, "will permit greater flexibility in selecting time and places for annual meetings by both organizations . . . The federation is growing and the increasing attendance at our annual meetings clearly indicated that remedial action was imperative. Separate conventions will now permit the acceptance of hospitality from many other cities throughout the country.

"Each convention can be extended to three or four days, should it become necessary to do so, and executive and technical personnel need not be absent from business simultaneously. The Paint Industries' Show is, of course, an activity of the federation and will remain an important part of our annual meetings."

He disclosed that the federation's board has under consideration a plan for zone or regional meetings sometime in the early part of each year. However, he indicated that a number of problems of "great magnitude' must be solved before this can be brought about.

"The long association of the two great associations of our industry has been beneficial to both," Dr. Overmyer declared, "and it is our devout hope that the spirit of friendly cooperation and assistance will continue to characterize our future contacts as it has over the years.

Dr. Calvin J. Overmyer
Retiring Federation President

Role of Science As Leader

"So now we are on our own. We know that we must go forward. The world depends on science and technology to lead the way. Continuing progress is the keystone of our modern society. The products of the paint industry now exceed a billion dollars annually.

"They represent the combined efforts of

—Continued on page 71

Despite a decline of 3.5 percent in paint sales during the first nine months of this year, Joseph F. Battley, president of the National Paint, Varnish and Lacquer Association, last week confidently predicted that "industry dollar sales in 1954 will break all previous records." This optimistic estimate was a highlight of the president's report to NPVLA's sixty-sixth annual convention, held November 15 through 17 at the Palmer House, Chicago.

Mr. Battley was elected to another three-year term as association president. Leo S. Guthman of Bradley & Vrooman Company, Chicago, was elected for one year as vice-president to succeed Bernhard Mautz of Mautz Paint & Varnish Company, Madison, Wis. H. Braith Davis of H. B. Davis Company, Baltimore, Md., was re-elected to another year's term as treasurer.

Terming this year's paint sales figures as "encouraging," Mr. Battley declared that "a two and a half billion dollar industry should be normal." To make this goal possible, he said, paint makers must survey their products, sales and distribution systems on a continuous basis. In this period of intense competition between industries, he pointed out, products, distribution and merchandising procedures in the paint industry must be more advanced than ever before.

Three Key Steps Suggested

For the industry to make major strides along these lines, the NPVLA president said, three steps are needed. First, he asserted, paint makers must "develop new products and keep improving quality." Secondly, they should act promptly on reports and ideas from their salesmen and distribution. Finally, he urged the paint manufacturers to use NPVLA's consumer's painting habits survey to locate "potential or new markets, both for the present and for the future."

"There can be no progress in an industry that is more concerned with sales today than with the markets of the future," Mr. Battley emphasized. "Progress requires new ideas, new products and modern merchandising or we go out of business. There are many factual examples I could use, but let's not use the horse and buggy vs. the automobile as the negative example, but use our progressive industry as a positive example.

"Where would your sales—your prosperity—be today if you had not kept pace with technical progress. Today you are making products that were not in the test tubes when I joined you seven years ago. I again repeat my belief that because of your initiative and progressive spirit, five years from now you will be making and selling more and better products than those we know today."

Joseph F. Battley
NPVLA President

Association's Motion Picture Program

Citing the association's motion picture program as "an outstanding example of a progressive industry," Mr. Battley reported, "The 'Here's How' films in color, starring Norman Brokenshire, have been seen by audiences of over 12,000. One hundred and seventy-two requests from television stations with more than 20,000,000 viewers have been filled with the

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Health-Education Program

Turning to NPVLA's health-education program, Mr. Battley reported, "Its objective is to educate parents to the necessity of watching their children's eating habits and to emphasize that local medical and public health authorities should use known clinical data when diagnosing children's illnesses. There is much important work to be done by us and other agencies in this field. I have met with representatives of the Department of Health, Education and Welfare. We are promised full cooperation and information which we can use in our program. They will distribute our material through their nation-wide agencies.

"Our subcommittee on model labeling was successful in securing the adoption of a practical label by the New York Board of Health. We have until May 1, 1955, to conform.

"I have received letters from health officials of both Chicago and New York commending this association for its sincere interest and cooperation. We cannot take all the bows and I want to express our appreciation to the American Standards Association and the paint industry's members of their committee for their splendid and valuable contribution. But of course the real solution is not labeling alone—it lies in a continuous overall health-education program.

NPVLA's Governmental Relations

Discussing the association's relations with the government, Mr. Battley remarked, "Nothing can be more satisfying personally than to enjoy the mutual trust and respect from government agencies. This confidence has been demonstrated many times over the years, but especially during and following the senate FHA investigations this year.

"Sen. Capehart of Indiana and the Federal Trade Commission both decided to investigate the mastic coatings rackets after we pointed out that the complaints in this matter were not against paint manufacturers, but against high pressure salesmen and unethical advertising by some irresponsible applicators. I am confident that your vigilance and promptness in reporting these fly-by-nighters will completely eliminate a racket which brought an unwarranted and unfavorable reaction against our industry as well as the responsible painting contractors.

"I can report marked progress in our efforts to have the navy give up their paint business. The Business and Defense Services Administration of the Department of Commerce completed their studies of government competition with several industries. Paint manufacturing was considered an unnecessary government operation. I am advised that the Bureau of the Budget will issue a policy directive stopping all unwarranted government manufacturing activities. As you know, the President stated specifically at Denver, October 8th . . . 'Our government has been returning to private citizens activities traditionally belonging to private citizens. It is stopping the roasting of coffee, the baking of bread, the making of paint and clothes.'

Offer of Cooperation Cited

"We have offered our cooperation to the Department of Defense," the NPVLA president continued, "in finding new jobs in our industry for navy paint personnel and assist in disposing of the surplus machinery, equipment, raw materials and finished stock."

Among other points made by Mr. Battley were:—

1. That the association's traffic committee has succeeded in getting a reduction in the classification of paint shipped in small containers. "Five-gallon containers of twenty-six-gauge steel were authorized for shipping our products and the proposed truck pickup and delivery charges were dropped," he explained.
2. That the association has called upon the Interstate Commerce Commission to declare the $1.50 surcharge illegal and to investigate increased truck rates in middle Atlantic territory. Hearing on the latter is set for next Monday. The Post Office Department, it was pointed out, now permits paint makers to mail low flash-point paints and paints in aerosol containers.
3. That NPVLA's consumer painting habits study "is the largest and most comprehensive survey of the type ever made."
4. That the association's technical and laboratory operations were made separate responsibilities this year and that laboratory work on moisture menace will be continued "to determine the performance cycle of so-called 'non-blistering' paints, the degree or extent of vapor transmission through interior and exterior paints, and its relationship to adhesion on various types of lumber and adhesion problems of wall construction materials, such as plaster, wallboard, cement block, or wood."

Responsibilities of Businessmen

Mr. Battley indicated that he had a few remarks to make about what he called "our responsibilities as businessmen." "It is part of our responsibility," he declared, "to grow in knowledge—to develop new materials and new uses for old ones. This has a very practical application for the possibility of another war is always with us—a war today makes survival the deciding issue. The outcome would be dependent upon the potential of our American and 'Know How' industrial facilities and the capacity of our military forces to fight.

"Unfortunately, there are people who appear to thrive on continually repeating unfounded stories of a breakdown in our foreign relations. When I hear talk of hot wars or cold wars, I worry. I worry because I know the strength of the power of suggestion. I remember when we talked ourselves into believing that we had the potential and the capacity to fight when we didn't have either. Our allies held the line until we were ready. They need us now. We had to assume that leadership and responsibility.

"It is ironic that in this land of freedom that our attitudes and actions are so easily misunderstood at times by one or two of these allied. But this is the situation that exists and it must be faced as a factor which affects our foreign diplomacy. We as American businessmen have a responsibility to support the foreign policy of our country.

World Situation Outlook

"Assuming the continuation of the present international situation, I look for some local incidents, but at least no World War III for another five years—if then but no further expansion in our military activities for I feel the actions of Moscow and Pekin are intended only to determine the extent to which we will go to defend free men. We and our allies have made so much progress since Korea in the potential industrial and military capacity for joint action that their survival, not ours, is now the deciding factor.

"Furthermore, we have a major responsibility to maintain the continuous improvement in the way of life in this country. Fortunately, our products directly affect the standard of living of every one of our people by contributing to their health and adding beauty, durability, and cleanliness to their many necessities.

"There is in our industry an atmosphere of determination — one full of positive thinking—one completely free from any creeping paralysis in leading the way to a fuller and better economy.

"This spirit of our industry is well expressed by the words of Thomas Huxley: 'The rung of the ladder was never meant to rest upon, but only to hold a man's foot long enough to enable him to put the other foot somewhat higher.'

"As representatives of business it is our responsibility to convince the uncertain

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that we are determined to continue our progress—that we will assure prosperity. You must convince them that the business world will never permit the development of another depression period such as we knew in the early thirties.

"This is the real challenge to each one of us. If we can maintain the proper frame of mind among our people, we have no serious problem. Our resources will be developed. New machines, new products, more scientific discoveries will bring improvements in our way of life and this is our potential for peace," he concluded.

Translating the Economic Scene

Businessmen this year failed to meet squarely their "very special responsibility" of translating for their employees into understandable English "the frightening mumbo-jumbo of recessions, of depressions, of cutbacks, and layoffs," Harold C. McClellan, president of the National Association of Manufacturers, declared.

"We in business—all of us—and we should have been sensitive to the fact that there was among our employees earlier this year talk of leaner times and tightened belts," he said. "Many evidences of human doubt were available to the naked eye. The fear mechanism had been well oiled by those who would profit from having it well oiled.

"Most of us in industry have been conscious of the fact from the beginning that we are in a period of business transition—not depression—a transition most of us have been predicting for at least ten years. I doubt that anyone in this room recognizes it as anything else."

Conceding that "what we are going through is not easy," Mr. McClellan called upon industry to face up to the facts. "In the change-over from an all-out war economy to a defense economy to a peacetime economy," he pointed out, "tremendous adjustments were necessary if an ultimate serious depression is to be avoided.

Transition Is Going Well

"I, for one, believe that the transition is going well—and will continue to go well—if both government and industry continue to meet their proper responsibilities adequately—and if we can prevent socialist-minded propagandists from drawing us off the sound course that has been adopted."

The NAM president suggested a quick look at some of the facts.

"During the first nine months of this year—our gross economic activity did decline 3 percent—but the economy has not deteriorated.

"Individual personal incomes from all sources are running about as high as ever before—within 1 percent of the 1953 peak month.

"Consumer spending for goods and services for the first nine months of this year were at an annual rate of two and one-half billions ahead of last year.

"Employment has increased in this country by 2,300,000 since last January 1st.

"There are 6,000,000 more men and women working today than were contained in the entire civilian work force in 1941.

"I learned in Detroit late in September that more than 100,000 men and women would be re-employed in the automobile industry alone by mid-November.

"Certainly this does not reflect any threat of depression," he declared.

Reason For Optimism

"With the re-establishment of a proper national climate for industry expansion—and with the potentials for economic growth resulting from our growing population—there is every reason for long-range optimism.

"We all know, however," he continued, "that when the change began some people in the mines, and mills, and factories, in the stores and shops were singing a different doleful tune. Their voices were clear to be heard and their refrain still echoes throughout the land. From the very first this should have been the sharpest sort of signal for industry. That we largely ignored the signal is a reminder that the full function of industry even now isn't being explained and so it certainly isn't being fully understood. I think every one of us as employers should have heard the first faint bell as the transition began and that we should have been on hand to explain to our employees what that new noise was. It was a country returning to normal and it needed defining.

"I think we should be proud of the average American workman. He is an intelligent, honest, hard-working, home-loving citizen. He loves his country, is willing to fight for it, and is concerned about its future. But, unfortunately, just like you and me, his judgment is no better than his information.

"He needs a better, broader understanding of American enterprise, and all of America needs to know that our business system is not just a system for the benefit of stockholders and employers but that it includes all of us. Each has his opportunities in it and each gets benefits from it.

"During the past few years, enlightened industrial management has made tremendous progress in the improvement of its methods, its policies, and in its overall achievements. But there is much more to to be accomplished. The need for broader understanding of the merits of the American business system is compelling," Mr. McClellan concluded.

US Mobilization Plans Detailed

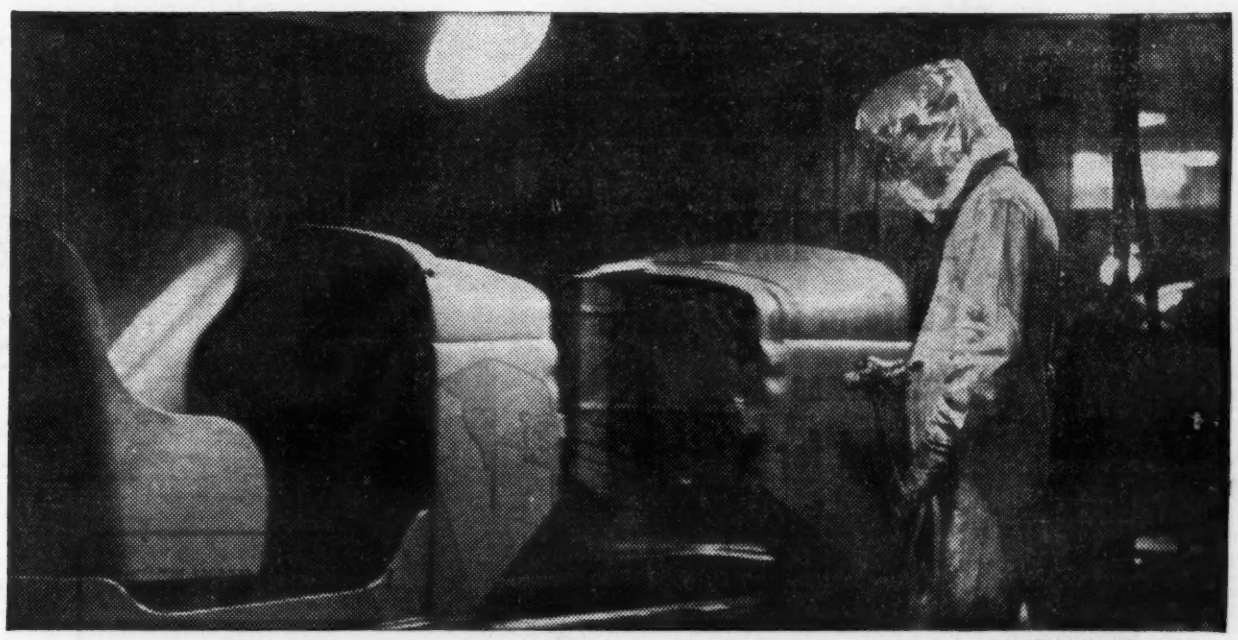
What the government is doing to make sure that the nation has sufficient manpower and facilities "that can shift overnight from peacetime to wartime production" was detailed by George A. Landry, assistant director for production in the Office of Defense Mobilization. First of all, he said, the government is getting more reliable data on US needs in the event of stepped-up or all-out mobilization.

"For the first time in the history of the nation's mobilization activities," Mr. Landry explained, "the Defense department has told us what would be required in the event of all-out mobilization. They have given us schedules of 1,000 major military and items which would account for 80 percent of the expenditures for military hard goods if we should be plunged into mobilization. The Defense department, the Joint Chiefs of Staff, and the Office of Defense Mobilization have worked out continuing relationships in order to keep these requirements as current as possible.

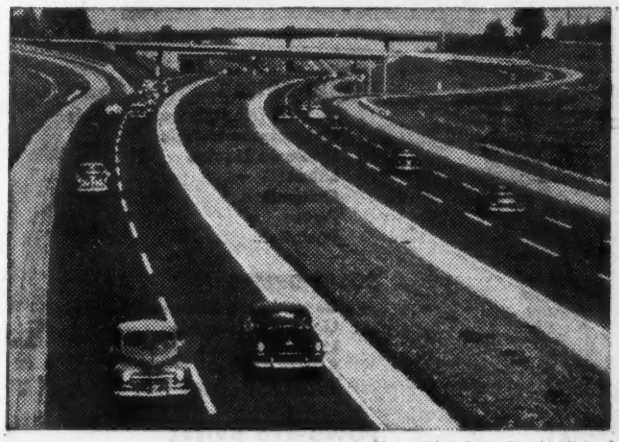
"Other departments are now helping to provide us with the war-supporting and rock-bottom civilian requirements. When this is finally balanced against our supply information, we are able to make a more intelligent identification than ever before of the gaps in our mobilization base. This is a continuing job and a great deal can and must be done in the direction of constantly refining our requirements data."

Closing Gaps in Base

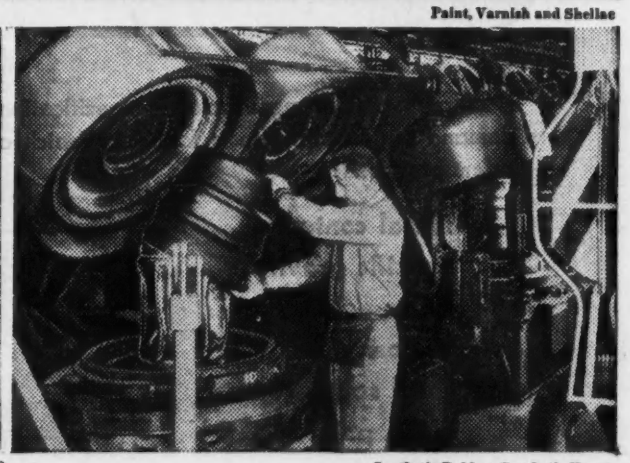
In the second place, Mr. Landry said, the nation is continuing to close the gaps in its mobilization base. "After the outbreak of hostilities in Korea," he noted, "223 expansion goals were established. Each goal represented a gap in our mobilization base. These goals have largely been filled but some ninety-five of these goals remain open. A large part of the expansion has taken place by private capital investment with the aid of rapid tax amortization. Over 19,000 tax amortization



Paint, Varnish and Shellac



Motor Oil and Gasoline (Additives)



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PETROHOL	Isopropyl Acetate	Denatured Ethyl Alcohol
Methyl Ethyl Ketone	Acetone	Tridecyl Alcohol
Dewaxing Aid	Methyl Ethyl Ketone	Dicyclopentadiene
Ethyl Ether	Ethyl Ether	Isoprene
Isopropyl Ether	Isopropyl Ether	Butadiene
Reference Fuels	Dicyclopentadiene	Ethyl Ether
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certificates have been granted for a total expansion of about $30,000,000,000. Some 350 additional applications for nearly $2,000,000,000 worth of plant expansion are now being considered.

"We are working on programs for closing the remaining goals and for making sure that we have identified all the gaps. I should like to give you a few examples. But first let me tell you that ODM controls a fund of $2,100,000,000 which was authorized by congress to be used in expanding productive capacity and supply. As a matter of policy, this fund has not been used in industry areas where the necessary expansion could be accomplished with tax amortization and private capital investment. Consequently this fund has been used largely in the fields of strategic and critical materials and production equipment. The technics used were loans and contractual guarantees of various sorts.

Defense Loans Are Cited

"Defense loans have amounted to approximately $340,000,000. Contractual guarantees to bolster the supply of strategic and critical materials and to assure the availability of production equipment are estimated to cost the government approximately $1,200,000,000. $22,000,000 of this amount is being spent to finance domestic exploration for strategic and critical materials.

"Congress has provided authority and funds to support the construction of twenty-nine new tankers (twenty-five to be built by private industry and four by the government). These new ships will replace, and permit the lay-up in the reserve fleet of about 58 T-2 tankers now in operation.

"The Defense Department," he continued, "has under consideration a program to award contracts totaling approximately $100,000,000 for long lead-time tools and equipment essential to defense but which are not used in general manufacturing.

"To encourage the building of freight cars where there is an open goal, we raised the percentage we allow on tax amortization certificates to 85 percent some five months ago. The percentage had been sixty, and later seventy. Since then, TA certificates have been granted twenty-six railroads covering nearly 7,500 cars at an estimated cost of over $50,000,000.

"Just last week tax amortization was granted for ten electric locomotives to cost over $4,000,000. This brings up to 235 the total number of locomotives covered by TA certificates we have granted twelve railroads in this same five month period at an estimated cost of nearly $40,000,000. Thus, as in the case of freight cars, the carrying capacity of the railroads where we have open goals is being increased with private capital, notwithstanding the fact that railroad traffic being what it is, it is difficult for the roads to justify the purchase of equipment even with tax aid as a stimulant. Thus, a mobilization base in this industry which is so vital to defense is being maintained."

Large Tools Program

Mr. Landry also pointed out that the government has several other programs under way to strengthen ODM's concept of the broad base. One, he said, is a program to step up the nation's capacity to build extremely large tools necessary to produce large modern machine tools. Another study cited by the speaker is ODM's review of US capacity to produce about fifty types of components, such as anti-friction bearings, fractional horsepower motors, aircraft instruments, turbines and turbine gears.

As the third part of its overall plan, Mr. Landry said, the government is working on the maintenance of the mobolization base. "Current defense production," he stressed, "is playing and will continue to play an important part in keeping us in a state of readiness.

"Undoubtedly there is a point below which this production cannot be permitted to fall without jeopardizing our ability to convert rapidly to meet wartime needs. We must determine what that point is. Then programs must be developed that are designed to keep production at the agreed-upon level by producing items which, if available, will save valuable time if we should become involved in hostilities.

Placement of Government Orders

"We have directed the Department of Defense and other procurement agencies to place orders for current production, to the greatest extent possible, with firms that they have already selected as a part of the mobilization base. The Department of Defense, for example, has approximately 35,000 firms on its list of 'Planned Wartime Material Suppliers.'

"Procurement will be spread among these firms consistent with those sound procurement practices that are designed to help keep the government solvent. There have been times, however, when the desirability of maintaining the base in a state of readiness has outweighed the desirability of placing orders with the low bidder. Security will never be subordinated to economy.

"Also," he went on, "we are not overlooking our human resources when it comes to placing orders for current production. Procurement officers have been directed to give special attention to production facilities in areas of labor surplus, to the extent that they can do so without paying price premiums. Long periods of unemployment in any area are bound to weaken the foundation on which our defense mobilization program rests. We are using tax amortization to assist defense industries in locating in labor surplus areas that are outside of target areas.

Chronic Labor Surplus Case

"In a recent case we have granted one company a tax amortization certificate to assist it in building in a chronic labor surplus area a plant essential to defense that will cost over $30,000,000, none of it government capital. Obviously, however, it is impossible to keep in operation in a period such as the present all of the production facilities which would be needed for war production. To do so would bankrupt the nation.

"We are working, therefore, on keeping that part of the mobilization base not now in use in such condition that it can be utilized for war production in a short period of time. We are not going to repeat the mistakes that were made in the years immediately following World War II. Then a large number of government-owned facilities were sold. Those retained were often allowed to deteriorate because of inadequate appropriation for maintenance. Government-owned tools and equipment were sold, scrapped or improperly stored and maintained. Privately-owned facilities were often substantially altered so as to make it impossible to convert them to war production.

"As a result, we were not ready when we became involved in hostilities in Korea. We spent huge sums of money in an effort to make up for lost time. Fortunately, we had time in which to prepare. We know that that will not be the case again. That is why we are doing something about it now.

Storing US-Owned Tools

"The Defense department and other procurement agencies, for example, have been directed to arrange with management to store government-owned tools in 'standby lines' or in 'package form' at or near plants which are a part of the mobilization base and which are no longer needed for current procurement. The military department will pay the costs of storage and maintenance which may be incurred by such a facility.

"In addition," he indicated, "the Defense department and other procurement agencies have been directed, wherever possible, to arrange with management to keep available a group of key managers, engineers and skilled workers, familiar with the items planned for a wartime production. This may be done in some instances by placing educational or research and development contracts with the company. This is a difficult problem to work out. And yet it must be worked out. We cannot have a dynamic base unless we keep our manpower as well as our plants and equipment in a condition of readiness. It is expected that the cost of this maintenance program will run to approximately $300,000,000 a year."

The fourth and final part of the overall plan, the ODM official stated, are the steps being taken by the government for the protection of the US mobilization base against attack. He noted that President

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Eisenhower on October 8th stated, "Soviet Russia has the capability of attack on the United States and this capability will increase with the passage of time."

Using Tax Aid for Protection

"In the light of this fact, under the authority of the defense production act," Mr. Landry reported, "we are using tax amortization as an incentive to channel new construction to areas of less vulnerability . . . and to encourage protective construction of vulnerable facilities.

"Basically, protection of our industrial capacity must be tackled industry-by-industry—by industry itself. Each major industry must develop an emergency plan to insure maximum continuity of production in the event of attack. A number of industries have already begun to develop such plans. The government is providing guidance as to measures which are being tried by other industries and which might have general applicability.

"Industries are identifying the best measures that they can put into effect without government assistance. But, when necessary measures are developed and tested which cannot be applied by industry without assistance, government must and will be willing to step in in order to help safeguard the security of the nation.

"Never before in peacetime has our nation been faced with the necessity of identifying, developing and maintaining a mobilization base of the magnitude that the world situation now demands. As the President has stated so many times, we are in an age of peril. This means that baffling and complex as this problem is, it must be tackled with imagination and with the determination to solve it irrespective of the sacrifices that may be involved.

"We must maintain a 'massive capability' to strike back, if Soviet Russia is to be deterred from aggression. We must proceed from a position of strength if we are to succeed in convincing the leaders of Soviet Russia that the time has come to give consideration to measures designed to promote peace. That is why no stone must be left unturned in our efforts to provide America with a strong, broad and dynamic mobilization base," Mr. Landry concluded.

Pakistan's Paint Industry Described

A description of the paint industry in Pakistan was presented by Rahim Bux Khan, chairman of the All Pakistan Paint Manufacturers' Association. At present, there are about a dozen factories in Pakistan which are managed and run by Pakistanis with Pakistani capital. These plants, he reported, produce about 6,000 tons of paint yearly against a demand of anywhere from 10,000 to 12,000 tons.

Four of the main plants, the speaker continued, are equipped with modern paint and varnish making machinery and they employ qualified, foreign-trained chemists and technicians. "Almost every kind of paint is being manufactured in Pakistan," it was explained, "and the recent tariff protection has considerably stimulated our manufacturers not to lag behind in any particular line. So far we have not been able to produce nitrocellulose lacquers, but arrangements are already afoot in this direction and we hope to fill this gap by the end of this year."

Raw Materials Picture

In reporting on the country's raw materials picture, Mr. Khan indicated that Pakistan is rich in natural resources from which paint industry raw materials can be made. "At present," he said, "we do not produce the basic pigments, dyes or synthetic dyes or synthetic resins. We have rich deposits of red and yellow oxides of iron and compounds of calcium, magnesium, aluminum, strontium, barium and manganese, and also the ores of lead, zinc and antimony. The presence of cadmium and copper have also been reported. There are strong indications of the presence of ilmenite and chromate is found in huge quantities scattered over vast areas of land. On the organic side we have resources which yield mineral spirits, turpentine, rosin, tar and pitch, and vegetable oils such as Garjan oil, tung, castor, hemp and poppy seed and linseed. There is also an abundance of non-drying oils such as cottonseed and rapeseed.

"The more recent discovery of huge deposits of natural gas in Pakistan is most important since it has provided a solution of our fuel problems. Experts have calculated the life of the known deposits as sixty years, while more and more tappings are yielding further quantities. This will meet the industrial and domestic fuel requirements of three-fourth of western Pakistan covering an area of about 300,000 square miles.

Network of Pipelines

"A network of pipelines is being laid over the country and the supply is expected to reach Karachi by May next year. The discovery of natural gas and the announcement of American aid to Pakistan are the two outstanding events that I believe will turn the tide of success in our favor. The aid from your country we hope will develop more industries which will create more demand for paints of all types. While I hope that the paint factories in Pakistan will endeavor to cope with the requirements of the country with their limited resources, yet to be most frank, I feel that we have much to learn in the field of paint technology."

Turning to the question of paint specifications, Mr. Khan admitted, "At present, Pakistan is very deficient in the matter of paint specifications and paint testing. On going through your specifications of paint and varnishes, I have discovered that they include a staggering number of raw materials and test methods for paint manufacture and paint performance. This is because you have the means and scientific knowledge to explore deep into the mysteries of nature. But, we are far behind in this respect.

Paint Specifications Are Ancient

"Our specifications are almost antediluvian and their enforcement is so rigid that sometimes we are driven to the point of desperation. We know that far better materials can be used for certain quality products which will not only yield better performance and durability but prove more economical in the long run. A case in point is, that in almost all 'naval store specifications' the word 'synthetic resin' is unknown. Of course the paint industry is disturbed about this condition and is making attempts to correct it.

"Then too," he continued, "we don't have an independent central paint laboratory in our country. We want such a laboratory which should test and standardize the products on one hand and carry out research on the other, on all aspects of the industry compatible with the requirements of the country, with particular reference to the adaptability of the locally available raw materials. In my capacity as chairman of the All Pakistan Paint Manufacturers Association, I approached the Government of Pakistan for American aid on these two subjects and they have agreed to make a move in the matter. In fact, I have been advised to select a competent and skilled executive when I am in the States, and to propose his name so that arrangements can be made through proper channels to obtain him for Pakistan. We also wish to invoke the help of American paint industry to enable us to set up a fully equipped paint laboratory in Pakistan. I wish to submit these matters for your benevolent consideration and thought," he concluded.

Success, Failure in Communication

Dr. Samuel I. Hayakawa, noted linguistic expert, discussed success and failure in communication. Opening the roadblock to better communication, he contended, may be achieved by means of "active (non-evaluative) listening." He defined listening this way:—

"1. Listening does not mean simply waiting for the other fellow to get through so that you can start talking again.

"2. Listening does not mean spending all your time while the other fellow is talking, thinking up devastating counter-arguments to what he is saying.

"3. Listening means trying to see the problem as the other fellow sees it. I do not mean sympathy, which means feeling for the other fellow, but empathy, which means experiencing with.

"4. Listening means trying to restate the other fellow's arguments for him to see if you understand them correctly. We all have the habit of assuming that we understand long before we actually do."

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listening" means, Dr. Hayakawa pointed out, that a conflict situation is turned into a communication situation.

The second advertising and sales promotion managers' forum heard and took steps to implement a suggestion from Mr. Battley, association president, that a more permanent committee on advertising and sales promotion be developed within NPVLA.

Running through several of the detailed phases of the forum discussion were a number of questions which appeared to reflect the thinking of the group. There was general interest in an intensification of training of retail paint salesmen, through all available resources, including a revision of "Paint Power" and more use of home study courses.

Some discussion also emerged on the need for an elementary booklet of basic types of paint for use of salesmen in smaller stores. Also brought to the association's attention was the fact that in some instances manufacturers or their staffs are not fully making use of material already available from NPVLA.

Lonore Kent, assocation staff member and author of "Paint Power," discussed some of the material now published by the association and plans which can be made for further sales training material.

Putty Forum Discussion

Dan A. Copenhaver of Archer-Daniels-Midland Company, Minneapolis, Minn., told the putty, glazing and caulking compound forum that the many vehicles sold and made for this trade have caused a great deal of concern among finished product manufacturers, which has resulted in a demand for simplification of these vehicles. What is generally asked for, Mr. Copenhaver explained, is a "package-deal, wherein we can supply all the good inherent properties in one special oil."

Conceding this is "quite a request," the speaker felt that, with cooperation, oils producers might be able to develop a universal vehicle, "at least one which will eliminate some of the present difficulties."

"One of the outstanding problems," he went on, "is the fact that every geographic section of the country seemingly requires a different basic specification for similar work projects. Aside from government specifications, this creates an enormous problem. On the other hand, it has been our experience that there are basic vehicles which can be and are used throughout the United States so we have a foundation on which to work."

ADM, Mr. Copenhaver revealed, has repeatedly tried to produce a package-deal oil, one which can be used in both glazing and caulking formulas. "After much work," he declared, "we have come to the conclusion that two basic oils are no doubt necessary, one for caulks and one for glazing, for the simple reason that the two products are generally pigmented quite differently."

In closing, he announced that his company will soon offer to the trade "a single vehicle into which we have incorporated many of the virtues which to date must be obtained by blends of other ingredients. We intend to have a vehicle for glazing so that color, viscosity, acidity, texture, and ease of working are obtained by this one oil. Secondly, we have in mind to offer a caulk vehicle with package virtues such as proper viscosity, slippage, color, wetting, prolonged elasticity and excellent binding properties." With these two oils, he added, ADM hopes to cut manufacturing costs and to eliminate excessive inventory carrying charges in the putty, glazing and caulking compound trade.

Trade Sales Manufacturers' Forum

J. Harold Kolseth, executive vice-president of Devoe & Raynolds Company, New York, suggested to the trade sales manufacturers' forum that the reason paint trade sales have not "kept pace with the total level of consumer spending" is because painting is "definitely a postponable maintenance decision," and not because the product itself is too durable, nor unsatisfactory in performance and cost. In fact, he said, "Paint today is definitely a better product, relatively less expensive and easier to use."

Besides the need for more aggressive selling and promotion to stimulate paint sales, Mr. Kolseth expressed the opinion that there were steps to be taken that "would not add relatively to selling costs," but that would effectively sell paint's "preventive maintenance and ease of use." One of these, he suggested in his "easy-to-buy" checklist, is completeness and simplicity of label instructions, as well as its ability to convey confidence in the quality and beauty of the product.

"Availability and aggressive promotion of color" ranked high in Mr. Kolseth's "easy-to-sell" checklist. He said that "any company today that is not training

—Continued on page 79

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Papers by Affiliated Clubs

Painting of Plaster Surfaces—Part 2

Cleveland Club

In part 1 of this study, reported in 1952, an accelerated method of test was described for the evaluation of paint coatings on plaster. The present study is a continuation of that work, and is based upon it.

The accelerated test consisted of a test surface which was a small plaster disc which was coated with the paint under test. The testing unit, or cell, was a petri dish containing a cotton pad saturated with 2 percent sodium hydroxide solution. The plaster disc was placed on the pad, painted side up, and the entire unit then covered with a watch glass. Periodic inspection recorded the time of film failure. It was felt that by this method the difference could be distinguished between good and poor coatings within a ten- or twelve-day period.

The apparent success of that work led to consideration of three further objectives:—Development of an adequate system of grading paint failures, the correlation of results with actual performance and improved test methods.

Grading Paint Failures

For grading paint failures a numerical system was adopted ranging from 10 down to 0, in which 10 indicates no failure and 0 complete failure. For example, a rating of 8 would indicate that 80 percent of the painted area had not failed. Thus a rating can be obtained for discoloration, blistering, efflorescence, saponification, and any other type of film breakdown.

The sensitivity of the test was much improved over the initial work in 1952, and enabled greater distinction to be made between different coatings of the same general type, by changing from a 2 percent sodium hydroxide solution to solutions of a considerably lower concentration. Another modification of the test method involved the tinting of the plaster disc with carbon black. This made it more easy to read test results, particularly of whites, which were a bit difficult over white plaster.

Still another test procedure change was made in connection with the watch glass cover of the test cell. The watchglass was eliminated from the test procedure, making it possible to conduct tests at elevated temperatures. Accordingly, the test method has been rewritten to incorporate these improvements. The use of iron blue as an indicator in such tests was found to be poor practice because the alkali failure of the iron blue, itself, contributed to film breakdown.

Significance of Tack-Free Test

New York Club

An effort was made to correlate tack-free tests made by mechanical means with actual finger and thumb tests. The mechanical device selcted was the Atlas tack-free tester, also known as the Zapon tester.

Since the tester as designed and patented did not, with use of aluminum foil, give practical results, efforts were made in experimenting with modifications of it, to bring results more in line. It was soon learned that when the aluminum foil was replaced with a brass plate, much faster tack-free readings were obtainable than under the standard procedure. However, when the brass plate was replaced with stainless steel or smooth glass, the instrument gave much longer tack-free times than was observed by the finger touch method.

Rough Glass Surfaces

Sand-blasted glass was found to give readings in line with the aluminum foil standard. It offered the advantage of a permanent surface that could be readily cleaned, and one which is not subject to wrinkling or in need of frequent renewal. Glass plates roughened in different ways were tried out. Grit blasted glass surfaces gave faster drying times than those obtained with the finger method, under controlled conditions of temperature and humidity. Further modifications were then undertaken with respect to the size of the weight used on the instrument. A weight of 1,000 grams was found to give results on repeated tests that correspond very well with results obtained by the finger touch method.

At this point, it was decided to make a series of tests on a relatively fast drying finish in which dry times were run on five successive days by five different tack-free time methods. The methods employed were as follows:—

Comparative Test Methods

1. The grit blasted glass tester and 1,000 gram weight were used. The weight was applied to the film for five seconds and removed. The film was considered tack-free when the tester fell over instantly.

2. The TT-P-141-b tack-free test: "The film shall be considered tack-free when the finger with a slight pressure will not leave a mark. The surface shall not be sticky."

3. TT-P-141-b finger method—free from after-tack: "The film shall be considered free from after-tack when the film shows no pull on the thumb when the maximum pressure that can be exerted between the thumb and finger without twisting is applied for two seconds."

4. TT-P-141-b umpire method: "Place on the film to be tested for after-tack a piece of No. 1 gumming Kraft paper measuring 2 x 3 inches. Place a 2-inch diameter cylinder weight, sufficient to produce a pressure of two pounds per square inch on the paper, and allow to remain for five seconds. Then turn the film upside down and note whether the paper drops off of its own accord within ten seconds."

5. Finger and cigarette paper test: A moderate finger pressure was applied to a cigarette paper placed upon the test film. The film was considered tack-free when no tearing noise was obtained upon removal of the paper.

Conclusions Are Reported

In this last test, there was little statistical difference between the methods or between the laboratories. The following specific conclusions were drawn:—

1. The test methods studied show poor reproducibility, as illustrated by the broad range of values obtained.

2. From the results, there is no justification for preferring one method over another.

3. In general, the agreement among laboratories was within the precision of the test methods used.

4. It is inadvisable to suggest a preferred method of determining tack-free

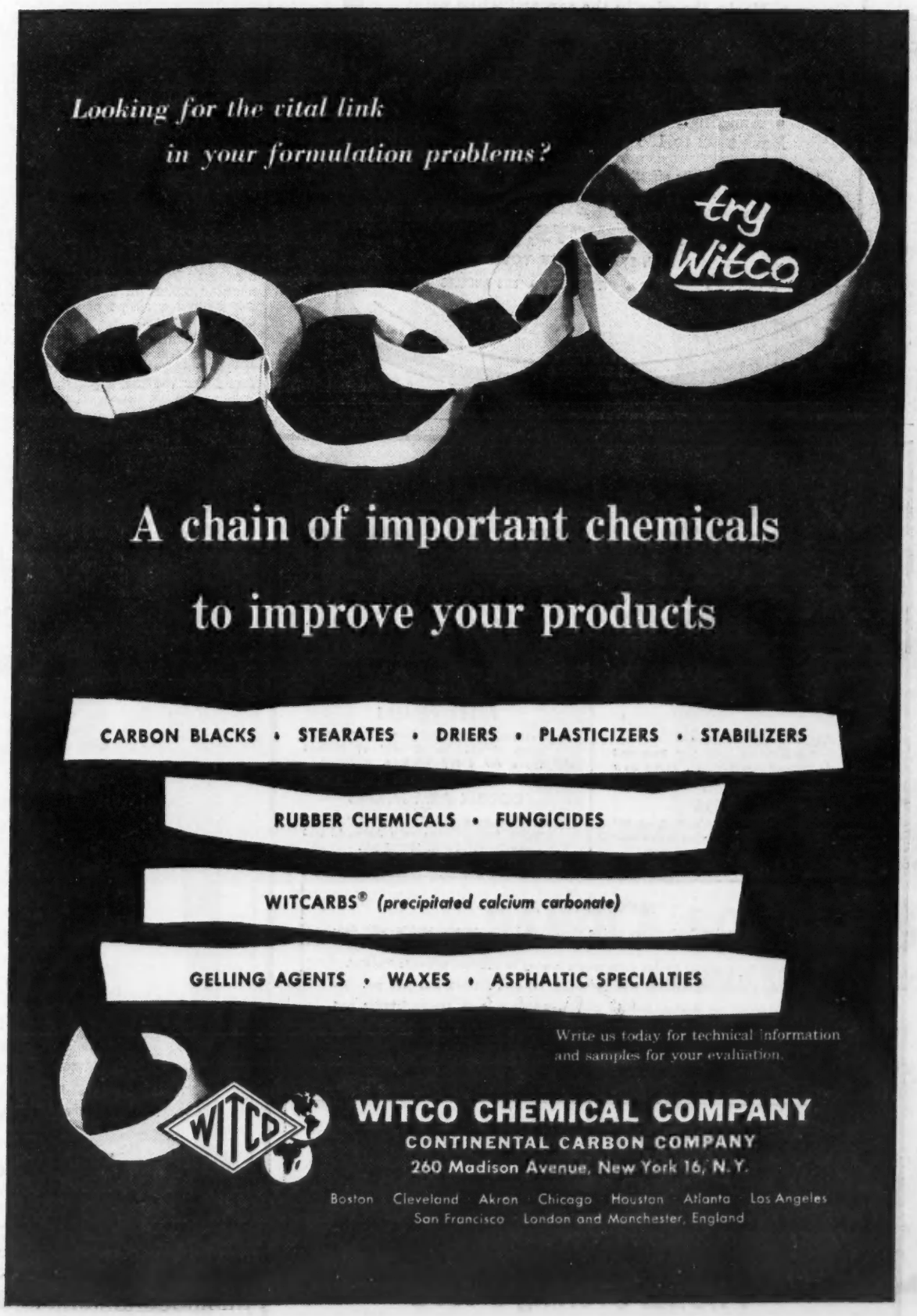
Federation's Split From NPVLA Explained

—Continued from page 65

scientists and technologists in the resin, pigment, thinner, oils and some segments of the chemical industry—all working closely and understandingly with the chemists and technologists in our own paint industry. We all work together for a better product, a better organization, a better nation and a better world.

"This privilege of working together, shoulder to shoulder, with freedom unlimited has made our country great. For hundreds of centuries famine and disease have kept the peoples of the earth on a bare existence level and then in the short space of the last two centuries, in a new land, a new life was devised. With vision and work and freedom unlimited we here in America established freedom to apply our imaginations, inventions and energies to the creation of the things we wanted.

"We have long since learned that we cannot have more unless we produce more. Somehow we have discovered a new technic for productivity. About 46 percent of the total manufactured goods of the world are produced in our country where we have only 7 percent of the world's population. I believe this new productivity technic to be competition."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time, but the careful use and interpretation of existing methods is recommended.

5. In view of the variations experienced in attempting to make duplicate readings (under controlled conditions of film thickness, temperature, and humidity), it appears necessary to allow a safe margin when specifying a definite tack-free time.

Calibration of Sward Hardness Rocker

Los Angeles Club

While the Sward hardness tester has enjoyed wide use in the industry, it has become apparent that the reproducibility of the readings as obtained with existing technics of calibration has not been entirely satisfactory. Parker and Siddle found that the oscillations of pendulum instruments decay in amplitude due to elastic indentation, elastic hysteresis and frictional and cohesive forces between the surfaces in contact. Consideration of external frictional forces introduced the possibility that air pressure variations and instrument runner shape variations could cause errors. What would be the difference between readings taken at 5,000 feet as compared to sea level?

To measure these effects calibrations were made as usual on a glass plate at atmospheric conditions of 70°F. and 65 percent relative humidity, and then checked under a large glass desiccator equipped with a monometer and vacuum pump. Rockers with various runner shapes were made. Instead of glass substrates, calibrations were made using plastic panels.

Effect of Air Pressure

The effect of air pressure was shown to be an increase in the number of oscillations as the air pressure diminishes. This error was less important, however, than errors introduced by slight variations in the shape of the rockers. The difference between sea level and 5,000 feet represented about an 8 percent error. On the other hand, errors up to 95 to 100 percent may be obtained, simply by having another rocker in the laboratory, depending upon the shape of the rocker at the contact surface.

In calibrating four different rockers on glass for use on the plastic test panels, it was found that two sets of figures were found for the same panel, one set being about double the other. Obviously anyone using these four rockers in their laboratory would be in trouble.

When the rockers were calibrated on a plastic panel, they all gave the same results when tested on other plastic panels. Accordingly, it is recommended that a plastic panel made to give a Shore Schleroscope reading of 50 be used as the calibrating substrate. Plastic panels are more nearly related to paint films than is glass. A series of four plastic substrate panels could be used having a range of Shore Schleroscope hardnesses.

Hardness of paint films could then be expressed in terms of the number of oscillations obtained with the Sward rocker calibrated against a given plastic panel substrate of specific Shore hardness, or film hardness could be expressed as a percent obtained by dividing the number of oscillations on the test film by the number of oscillations used as a calibration figure on the standard plastic panel.

Primers for Metals in Atmosphere Exposure

New England Club

It had been hoped, when the steel panels coated with various metal protective systems were exposed over seven years ago, that a final report could be written in 1954. However, of the 576 panels exposed, only 38 percent have so far reached a point of failure of sufficient rating to fall below 5.

Accordingly, at the end of seven years, observations on this series lead to the following conclusions:—

Exposure Results

1. A comparison of primers with the same pigmentation, but with varied vehicles, indicates that alkyds and alkyd/varnish or alkyd/oil blends are the vehicle components which provide the best protection.

2. Pure red lead paints give good overall protection and excellent scribe protection during their life, but rapid chalking and subsequent erosion causes failures on primers where the vehicle is oil or varnish, and only slightly better ratings where alkyds are used. Mixtures of red lead, iron oxide and extenders in various vehicles give equal or better results than red lead alone. The added pigments appear to give better film integrity and

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3—Abbe 4'6"x5', Buhrstone lined.
2—Patterson Porcelain Lined Mills; 40"x48" and 30"x42".

ROLLER MILLS

Water cooled mills by J. H. Day, Ross and Kent; 12"x30" and 16"x40". Brand New Lab size Mills, 4"x8" and 6"x12".

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Double Ribbon horizontal Mixers from 200 lb. to 5000 lb.; also tumbling Batch Mixers for amalgamating in all sizes.

CHANGE CAN MIXERS

J. H. Day Pony Mixers; 15 gal. to 40 gal. motorized, complete with cans.
Post Mixers; 6' shafts; with mixing cans, 24"x28" and 26"x36".
Lead Mixers, 250 gal., 350 gal. and 700 gal.

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markedly reduced chalking as well as lower raw material cost.

3. Paints formulated with iron oxide alone show fair overall durability, but have poor rust pacifying qualities. The addition of 15 percent zinc oxide in the pigmentation of a linseed oil primer results in improved durability.

4. All blue lead, mixed pigment exposures in this study have given poor service. Blue lead primers in phenolic varnish, or in a combination of phenolic varnish and linseed oil, have failed on panels and angles. Two-coat systems on panels have also failed, and two coats on angles are one step removed from failure at this time. The addition of 20 percent zinc chromate in blue lead shop coats upgrades the primer.

5. Zinc dust-zinc primers in alkyds and in linseed oil show good rust inhibitive qualities, but poor overall film durability. Where the zinc dust is reduced from 80 percent to 65 percent, poorer performance results. Both primers are showing better protection with one coat on hot rolled angle specimens than red lead in linseed oil or any of the blue lead systems.

6. Generally speaking, as a group, zinc chromate primers (zinc content 46 to 55 percent) in alkyd vehicles have shown the best one coat performance record, both on hot and cold rolled steel.

Value of Zinc Chromate

Of the twelve outstanding shop coats on flat panels, eight contain zinc chromate and six of these contain it in excess of 46 percent. The vehicle component of nine primers is an alkyd of 24 percent phthalic anhydride, either linseed or soya modified alkyd. Two others use a phenolic varnish, and still another is a mixture of raw and bodied linseed oil.

Of the nine outstanding shop coats on angles, seven contain zinc chromate and five of these contain it in at least 50 percent concentration. The vehicle component of four primers is a resin of long oil soya or linseed, 24 percent phthalic alkyd. One uses a combination of alkyd and linseed oil, and the balance of the group are made with a phenolic varnish vehicle.

7. The best systems to date for hot rolled steel are a 50/20/11/20 zinc chromate/zinc oxide/iron oxide/talc in either a straight phenolic/dehydrated castor varnish, or in a long oil alkyd. A similar system is also among the better coatings for angles.

Best and Cheapest Primer

The best primer, from a cost as well as a performance standpoint, is a 16/15/12/28/28/1 zinc chromate/zinc oxide/titanium dioxide/talc/graphitic mica/litharge pigmentation in a modified 52-MC-29 alkyd. Standard 52-MC-29 is also giving equal performance, but has slightly higher material costs.

Study of Low Odor Alkyd Paints

CDIC Club

The development of the so-called odorless solvents by the petroleum industry was the first prominent step toward low odor paints. This was further assisted by the development of driers having a very low odor. These developments helped the paint formulator in the production of paints having less odor than orthodox type finishes.

Major Odor Sources

However, the major part of objectionable odor in paints containing drying oils and resins comes from reaction products developed in the drying of the film by oxidation. This process goes on during the life of the film but has its greatest intensity during the first forty-eight hours. A lingering odor persists for two weeks. Low odor paint vehicles involve the selection of materials for the vehicle which have been processed by vacuum distillation, fatty acid fractional distillation, and similar methods. For minimum odor, vehicles which dry by polymerization alone would be best.

Odors come from oxidation products in film drying. Among the products produced by fatty oxidation are peroxides, ketones, acids, water, carbon dioxide, hydroxy acids, hydrogen and polymerized fats, together with various aldehydes. Heptyl aldehyde has been cited as one of the aldehydes responsible for an odor of rancidity. When soybean oil is oxidized, acetaldehyde and propionaldehyde are produced.

Drying Mechanism

Since the drying mechanism involves initial attack at the double bond with the formation of a highly reactive peroxide linkage, which decomposed by polymerization, it is felt that free radicals play a large part in the reaction, and hence it would be desirable to provide free radicals initially and throughout the drying period of the paint.

Approached from this viewpoint, vehicles for white flat wall paint were made. Two were alkyd resins containing 34 percent phthalic anhydride, glycerol, soya or safflower oil modified, thinned with solvent and low odor octoate driers. Two other 30 percent phthalic anhydride alkyd resins were made, using pentaerythritol as the polyol, and the same oils, solvents and driers as the first two. These resins were thinned with regular mineral spirits in some cases and with odorless mineral spirits in others. This made various experimental paints available with and without odorless solvents and driers, and various combinations. Paints were made and evaluated.

Conclusions Are Detailed

Examination showed the following performance characteristics of the paints so made:—

1. All paints had good can stability, with slight settling in six days, and no observable difference between them.

2. In resistance to skinning, soya-pentaerythritol paints with all driers showed no skinning in six days. Safflower pentaerythritol with mineral spirits and all driers showed no skinning in six days. The same alkyd with odorless solvent and all driers skinned within twenty-four hours.

3. Soya-pentaerythritol with odorless thinner and all driers indicated the fastest RCI drying at both tear and break points.

4. In viscosity stability, soya-glycerol with odorless solvent and driers gained the least viscosity, while the same alkyd with octoate driers became very viscous in thirty days.

5. In viscosity difference upon reduction with solvent, the soya-pentaerythritol alkyd with odorless thinner and all driers indicated less difference in reduction than any other alkyds.

6. In washability and ink stain removal, the soya-pentaerythritol alkyd paints with all driers gave the best rating. On scrubbing, the best resistance was offered by the soya-glycerol alkyd with ocotate and with odorless driers, and the safflower-pentaerythritol alkyds, both thinned with mineral spirits.

7. The soya-pentaerythritol alkyds with either mineral spirits or odorless solvent as thinner gave the best ratings with no absorption.

8. Odor ratings on paints made with regular mineral spirits showed the soya-glycerol mineral spirits octoate drier alkyd paint to be the best with the safflower-pentaerythritol, mineral spirits octoate drier second best. Odor ratings on the paints made with odorless solvent showed the safflower-pentaerythritol and soya glycerol alkyds made with odorless solvent and odorless driers to have the best rating. Soya-pentaerythritol odorless solvent odor-drier alkyd paints were second best.

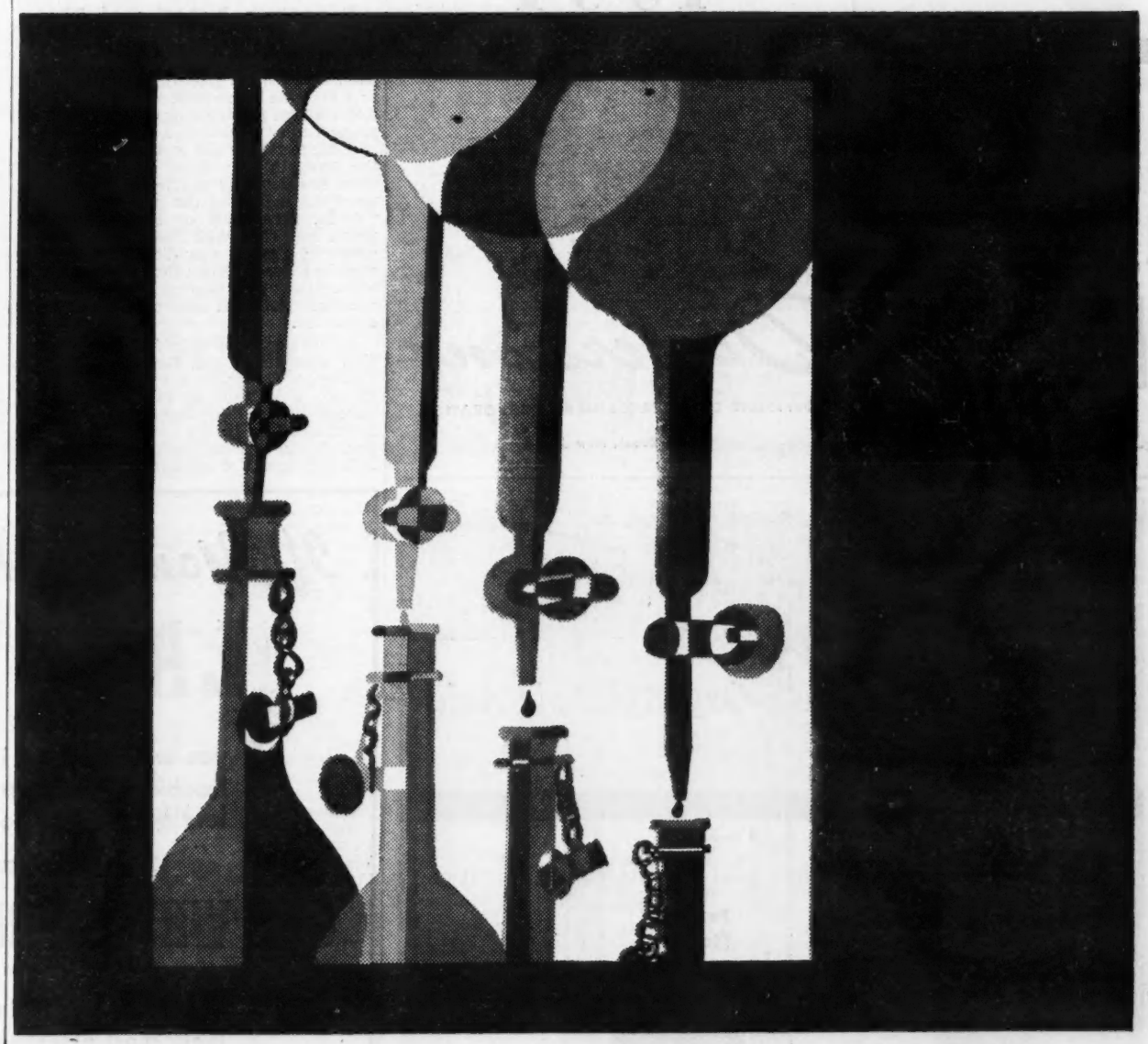
9. On odor ratings of the odorless solvent paints versus the regular mineral spirits paints, it was observed that all paints made with odorless solvent and odorless driers were of less objectionable odor than the corresponding mineral spirits paints. This was true throughout the drying period.

Odor Test Method

The method by which odor tests were run was as follows:—

Each series of paints was brushed on the bottom and sides of a cardboard box 14"x14"x8". Approximately fifty-seven grams of paint was used to coat the surfaces.

A sniff hole 2½" in diameter was cut in the top of the box. The painted boxes were assigned a code number, and about ten persons evaluated the smell in each box after one, two, twenty-four and 168



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hours of drying time had elapsed. Records were kept on slips of paper of the box with the least objectionable odor, next least objectionable odor, etc. Tests were conducted in a large library away for other possible paint fumes. The slips of paper were counted and the number of votes for each box by choice were noted. A point rating system was used to designate the differences in choices on the odor tests. First choice, three points; second choice, two points, and third choice, one point.

Nomograph for Alkyd Resin Formulation

Northwestern Club

This nomograph is a series of graphed percentage values and factors arrived at by calculations made from equivalent weights of various alkyd resin ingredients. It takes into consideration the usual excess quantities of polyol, and assumes no losses other than water. It is designed to save the alkyd resin formulator time and energy by simplifying, and often eliminating individual calculations. This nomograph, representing an improvement over previous nomographs, extends calculations to include straight oils and mixtures of oils and various types of acids.

Stress-Strain Properties of Films

North Dakota Agricultural College

Among other functions, pigments in a paint film tend to give it rigidity by acting as a skeleton framework in the dried film. Accordingly, pigments influence such film properties as flexibility and film strength.

A pigment may add to, or subtract from, the strength of a paint film, or it may leave it essentially unaffected. It depends upon the nature of the pigment and the vehicle. Zinc, lead, or other basic pigments may react with the vehicle forming soaps. Pigments may be bound to the vehicle by secondary valence forces, as in absorption. Or, pigments of a physical and chemical inert nature may be simply dispersed.

As pigment concentration is increased, film elongation and flexibility are decreased, while tensile strength tends to increase. This holds up to a critical point beyond which increased pigmentation leaves the film brittle and weak. Pigment particle size and shape affect film strength relationships. For example, when acicular shaped pigment particles align themselves parallel to the applied film stress, the tensile strength is increased.

Since little or no previous work has been done on the effect of emulsification on distensibility, this aspect was studied. Both water in oil, and oil in water emulsions were investigated. The effect of aging on emulsified films was observed with respect to the effects on elongation and tensile strength.

It was found that emulsification had some effect upon the tensile strength and elongation of unpigmented alkyd films. The tensile strength at the breaking point was decreased. The influence was greater with oil-in-water emulsions than with water-in-oil emulsions. The aging of dried alkyd films, and of dried alkyd emulsion films, increased the tensile strength for a period of at least up to thirty days. The greater the tensile strength of the alkyd resin film itself, the more apparent was the lowering influences of emulsification on stress-strain properties.

Paint Industry Literature Classification

Golden Gate Club

This paper represents a study made which demonstrates the effective use of a punched card system for the indexing, cross-indexing and classification of paint technical literature. Under this system a classification card was developed, designed to have the following indexes:—

1. Processes, Properties and Raw Materials.
2. Author and Source Index.
3. Chemical Index.
4. Common Variable Index.

These four classifications represent the four sides of the card. In developing this system, it was deemed advisable to sacrifice some mechanical exactness for the benefit of simplification. It was felt that if two-thirds of the cards dropped on a sort were of interest upon visual inspection, the system would be adequately proficient. One of the advantages of a punch card system is that the cards can be put back in the file in any order, and are just as easy to locate again when needed. On the edge for common variables, there is wide latitude for each individual user to code items as best fits his company's needs. The system is held practical for both large and small firms. A recommended code system for each classification is suggested.

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Protective Coatings Materials

Prices were advanced for Argentine casein, in response to a decidedly firmer tone at the source. The advance followed a concerted effort by Argentine producers to obtain higher prices for their material, and caught consumers in this country at a time when their stocks were thought to be fairly low. The market for the time being maintained a very strong tone, and dealers watched to see how long this strength would be preserved. Among the prime pigments, lead and zinc were steady. Nothing materialized in the metals market to change quotations for the pigments. Trading in white lead was reported quite active. Zinc dust moved fairly well to a moderate demand.

Advances in two intermediates failed to produce corresponding increases in prices of benzedine yellows. No plans were announced over the week to increase these colors. Nickel oxide remained in tight supply. Heavy government stockpiling kept the amount of material available for civilian demand down below the level needed to accommodate current inquiry. Cobalt and titanium oxides were found to be moving quite well, and were amply available from current production.

Alkyd demand was reported still on the upswing, with the automobile industry active purchasers. However, the increase appeared to be leveling off and no extensive addition to buying pressure was seen to be in the making. One manufacturer cut prices for its acrylic monomer paint emulsion resin. Dioctyl phthalate and di-iso-octyl phthaltte moved well to a fairly strong and varied demand. No price changes were reported for these materials, even though some reports of price shading persisted. Prices for shellac were quite firm. The Calcutta market has raised its sights, following the lower-than-average results of the last crops, and the price outlook now is for further strengthening. This upward movement is in contrast to views held widely just a short while back, which maintained that the year's end would see a lower price structure for shellac. Business in copal and dammar gums was better in Europe and in this country as well. Prices were quoted at unchanged levels, but were considered quite firm.

Price Trends

Advanced

Casein, Argentine, 3¾c. per lb.
Shellac, lemon #2, 1c. per lb.
Superfine, 1c. per lb.
TN, 1c. per lb.

Reduced

None

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
97.06	97.06	97.06	92.84

(For Current Prices see page 9)

Prime Pigments

Chrome Colors—Sales were reported to be fairly good during the past week. With material moving pretty well, the makers estimated that the market would finish out the year with an entirely satisfactory record. There was no special difficulty in obtaining shipments, it was pointed out, making this a market without outstanding feature. Price schedules remained as previously set.

Cobalt Oxide—Material remained amply available throughout the past week, it was stated by sources in the trade. Demand was up to the levels of the previous month, but appeared to be setting no new records. Prices were steady, and no changes were contemplated by producers, it was reported.

Lead Pigments—No price changes were effected on the lead pigments market over the week, and none were contemplated, it was stated in the trade. Lead paste moved moderately well to a fairly average demand. Trading in white lead was reported active, with sales hitting a pretty good pace but setting no new records.

Nickel Oxide — No easing of supplies available for the civilian consuming market had been noted up to last week, according to observers in the industry. The market remained still quite tight because of heavy government stockpiling. There was little doubt in the trade that a good deal more activity would be encountered whenever the supply situation eased, but as yet there was no expectation that this would be in the immediate future. Prices were firm.

Titanium Dioxide—A good demand was encountered for this material throughout consuming industries. An adequate supply situation prevailed, with present production capacity able to fill most needs without difficulty. Present expansion plans in the industry indicated that the nation's capacity to produce would keep in step with the expanded demand for this material. There were no changes in price schedules.

Yellow, Benzidine—Advances in two intermediates last week failed to produce corresponding increases in prices of the AAA and AAOT grades of benzidine yellow up to press time. Manufacturers stated that as yet they had no plans to advance these materials. Demand was reported to be steady and of a fairly routine nature.

Zinc Pigments—The market was reported very quiet. There was nothing to be noticed either abroad or here in this country to disturb the prevailing price or supply situation. With no changes materializing in zinc metal, the dust remained steady at previous quotations.

Synthetic Resins

Alkyds—Demand continued to pick up from certain directions, notably from the automotive industry, but the increase was reported to be leveling off and no extensive addition to buying pressure was thought to be in the making. With material moving well, and production quite ample for demand, the market was in an untroubled position. No revisions in price schedules were expected in the weeks just ahead.

Petroleum Hydrocarbons—Material was reported moving well, but could be doing better, according to at least one source in the industry. The sales pattern of this market is a cyclic one, it was stated, and although the overall trend is gradually upward, during certain periods sales are found to be slightly off in volume. New uses for this material have in the past spurred demand, and were expected to figure prominently in further expansion of demand.

Polymethacrylates — One manufacturer lowered its prices for its acrylic monomer paint emulsion resin. The cut in prices amounted to 2c. per pound, bringing the tankcar quotation down to 22½c. per pound. The reduction was reported to result from increased production of the material.

Lacquer Materials

Dioctyl Phthalate—The varied demand for this material kept shipments moving at a good rate, although production was well able to take care of most consumers' needs. Quoted prices were unchanged. The current sales picture seemed to indicate to most observers in the industry that there would be no immediate overall changes, even though reports of some price shading persisted.

Tricresyl Phosphate—This material was reported to be in a very good position, particularly with respect to its long-range outlook. The wide variety of uses for the different grades indicated to most producers that a continued expansion of its application would be seen. Previous price schedules were maintained without change over the past week.

Natural Resins

Copal Gum—Business was reported better both in Europe and in this country, with the result that demand was sharpened to a noticeable extent. Prices were quoted at the same levels as during the week previous, and were considered quite firm. Supplies were held to be adequate for consuming demand.

Dammar Gum—The market in this country has responded to a better overall demand from consumers. Prices were considered quite firm at their present levels. No changes were recorded during the past week. Demand was steady for most grades, it was stated. No quotations were available for No. 3 Singapore, as it was stated that consumers' attention was directed instead to the No. 2 grade, a better grade, or to dust, which was available in a lower range.

Shellac — Prices were raised 2c. per pound for lemon No. 2, and 1c. for superfine and TN grades. The expectation in the trade was for continued strength in quotations in the weeks

For Late Market Developments, See Page 4

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Chats about Finishes

USE OF ABITOL® GROWING IN ODORLESS ALKYD FINISHES
by
JOHN E. BIEGNER
Mgr. New York Office
Hercules Synthetics Department

One of the interesting developments in protective coatings has been the rapid increase in the popularity of odorless alkyd paints and enamels.

Coincident with this development has been a substantial increase in the use of Abitol, hydroabietyl alcohol. Last year, the use of Abitol in alkyd resins for flat wall paints increased 44 per cent over 1952, and 1954 sales indicate a further marked increase of the use of Abitol in this field.

Manufacturers are utilizing the unique physical and chemical properties of Abitol to produce special alkyds with better coating properties and to obtain processing advantages such as easier preparation control.

We have expanded our Abitol production facilities to meet new demands from the paint and varnish and other industries. We will be happy to discuss with you how Abitol can fit into your production plans.

John E. Biegner

Synthetics Department
HERCULES POWDER COMPANY
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ahead. This was in sharp contrast to views held widely only a short time ago, when dealers had expected lower prices by November and December. Now this view has been reversed and most changes are expected to be in an upward direction. The firm attitude on the Calcutta market was held responsible for this situation. The recent crops in India have not been as large as was considered necessary and this situation, combined with the present good rate of consumption on the domestic market, has produced the current firm outlook.

Miscellaneous Materials

Asphalt—A Bureau of Mines report on sales of petroleum asphalts and road oils in 1953 shows a figure of 4,745,192 short tons for asphalt cement; 3,688,324 short tons for cut-back asphalts; 724,296 short tons for emulsified asphalts; and 1,330,344 short tons of road oil. Sales of asphalt cements and fluxes amounted to 3,449,153 short tons and emulsified asphalt sales came to 10,202 short tons. Among miscellaneous products, asphalt cements and fluxes sales amounted to 1,329,592 short tons, and emulsified asphalts sales were given at 87,932 short tons. The reported total of 14,034,691 short tons is 12 percent above the 1952 total of 12,529,274; however, because of changes in the setup of the 1953 survey the different items making up the totals for the two years are not comparable.

Petroleum asphalt and products exported from the United States during 1953 came to 277,000 short tons, as compared with a total of 389,000 short tons during 1952, according to the Bureau of Mines.

Casein—The market in Argentina took a decidedly firmer turn during the past week, pushing the spot price up to 23¾c. per pound, an advance of 3¾c. over the previous low of the range. The advance came as a result of a concerted drive on the part of Argentine producers to obtain a higher price range for their sales. The big exporters in that country were reported to have protested the prices previously in effect and decided to strengthen their sales position by withholding sales except at an advanced level. The government floor price was raised 1c. per pound, but the advances affected by the producers were greater than this official action. Dealers in the United States were uncertain over the past week as to how long the present strength would last. The market was decidedly strong on spot, but most authorities were hesitant to state their expectations for the more extended outlook. For the immediate future, however, sales were expected to hold up well, as most

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PX-404 DiButyl Sebacate
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PX-800 Epoxy
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PLASTICIZER DIVISION
PITTSBURGH COKE & CHEMICAL CO.
Grant Building, Pittsburgh 19, Pa.
WAD 5028

consumers were thought to be in a fairly short position in regard to supplies.

Naval Stores

Rosin, Gum

(USDA, per 100 lbs.)

	Fri.	Mon.	Tues.	Wed.	Thur.
Drums—					
G	...	...	$3.00	...	...
H	...	...	8.00	...	...
I			8.00	...	...
K	$8.10	$8.05	8.10	...	...
M	8.00	8.05	8.10	$8.03	...
N	8.04§		8.25	...	$8.20§
WG	...	8.15	8.23§	...	8.20§
WW	8.37§	8.45	8.48§	...	8.34§
Bars—					
G	7.85		...	...	...
K	...	7.95		...	...
M			7.98	...	
N	7.96	7.95		...	8.15
WG	8.18§		8.30	...	8.25§
WW	...	8.20	8.12	...	8.20§

Tankcars (for week ended November 12)—
N $7.55, M $7.56, K $7.65§, 2,131*

Sales, USDA

3,453*	895*	674*	2,249*	1,188*

New York
(per 100 lbs., c.l., Friday)
B through M $8.85, N $8.90, WG $8.95, WW $9.20

Turpentine, Gum

(USDA, per gal., 7.2 lbs.)

Price	.515	...	...	...	...
Sales	18,000§†	...	...	...	...

New York, Friday, per gal. 7 lbs., tankcars, 61c., l.c.l. 73c.

*Drums equivalent. †Tankcars. ‡Gallons. §Average price.

Woburn President Resigns But Holds Board Position

A. G. H. Reimold, president and chairman of the board since 1926, has resigned as president of Woburn Degreasing Company, Woburn, Mass., but has retained the chairmanship of the board of directors, and as such will be the chief policy making officer. William E. Casey, for many years vice-president and general manager, has become president.

Mr. Reimold, who had held the office of chairman of the board and president of Woburn Chemical Corporation (N. J.), an affiliate, resigned as president in January but retained the chairmanship of the board. He was succeeded as president by Karl H. Reimold.

Passonno a Representative

A. J. Passonno, former paint manufacturer and protective coatings consultant has established a manufacturers' representative business in Florida, Alabama, Mississippi, Louisiana and Georgia. Mr. Passonno entered the new business with a background of more than twenty-nine years of diversified paint manufacturing experience. His headquarters address is P. O. Box 623, Tampa, Fla., where warehouse stocks will be carried. He also has an office with the General Electric Company, room 400, Red Rock Building, 187 Spring street N. W., Atlanta, Ga.

Alcohol Manufacture Permit Regulations Are Clarified

Limitations imposed on the transfer of basic permits for manufacture of alcohol through transfer of controlling stock interets were clarified last week by the alcohol and tobacco tax division of the Internal Revenue Service.

The division ruled that the transfer of a controlling stock interest in a corporation holding a basic permit under the Federal Alcohol Administration act from an individual to a corporation, in which the individual holds a majority of the outstanding stock, may result in the automatic termination of such permit thirty days after such transfer.

It was also held that if a majority stockholder of a corporation loses his majority stock interest and all of the minority stockholders thereby acquire legal control, the basic permit of the corporation may automatically terminate at the expiration of thirty days.

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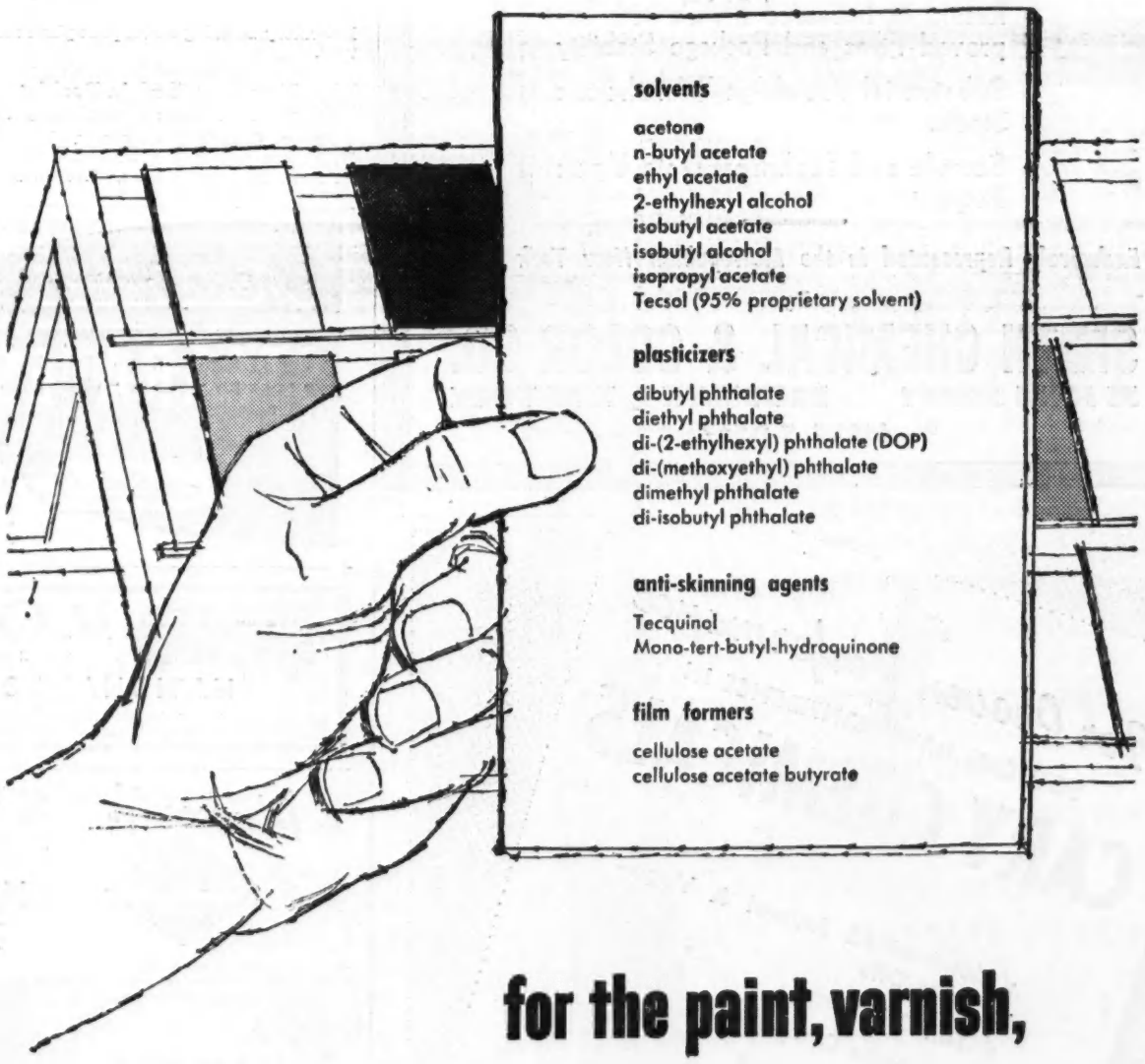

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isobutyl alcohol
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di-isobutyl phthalate

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Resinous Polyalcohol Offered For Use in Resistant Finishes

A new resinous polyalcohol for the manufacture of chemically resistant finishes and primers has been announced by Dow Chemical Company, Midland, Mich. Vehicles may be prepared from esters of this new resin, known as Dow Resin 622. These esters have the necessary properties required for the preparation of spar and floor varnishes, floor enamels, maintenance paints, and industrial primers and finishes. Exterior exposure to date indicates excellent durability of coatings prepared from the new resin as clear finishes, Dow said.

Some of the physical properties of esters prepared from "Dow Resin 622" are said to be:—Excellent solution and film color, excellent ester solubility in aliphatic solvents of low kauri butanol value, superior alkali and water resistance, excellent abrasion and impact resistance, good durability, good flexibility and fast dry.

Spencer Kellogg Expanding

Spencer Kellogg & Sons, Inc., has announced completion of plans for its new research center. Construction will be started soon on a group of new buildings which will be located in the company's headquarters city, Buffalo, N. Y. The company will build a research office and laboratory building and a pilot plant structure.

Wax Sizes Described in Booklet Released by Nopco Chemical Co.

Nopco Chemical Company, Harrison, N. J., has prepared a booklet describing its two lines of wax sizes, "Nopco 1055," and "Nopco 1155." The booklet contains charts which list the physical and chemical properties of the individual sizes in each series, their uses, and suggested application. Copies of the booklet are available from the company's Department PC at Harrison.

Acheson Names Olsson Assistant Sales Manager

A. T. Olsson has been named an assistant sales manager of Acheson Colloids Company, Port Huron, Mich. Mr. Olsson, formerly service engineer with offices in Detroit, Mich., recently served in Acheson's main office in Port Huron. His efforts will be now directed principally toward supervision of the company's service engineers in the field. This newly created post will enable G. C. Giles, veteran assistant sales manager, to take on added administrative responsibilities.

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SPECIFICATIONS: (Resublimed). COLOR, white; SUBLIMATION min. 99% granular or lump, 98½% powder; WATER INSOLUBLE, none; HEAVY METALS, none; IRON CONTENT max. 0.01% (Sublimed). COLOR, light yellow to gray; SUBLIMATION min. 98% granular or lump, 97.5% powder; WATER INSOLUBLE max. 1.0%; HEAVY METALS, none; IRON CONTENT max. 0.05%.

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Phosphorus Trichloride

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Resin-Based Paint Vehicles Introduced by Shell Chemical

Two new "Epon" resin-based paint vehicles designed for interior paints sold in the "do it yourself" market have been introduced by Shell Chemical Corporation, New York. The vehicles, developed specifically for use in odorless type flat wall paints, are "Epon" resin low odor architectural paint vehicle "A-300," and "Epon" resin odorless architectural paint vehicle "A-301." These vehicles are said to possess many of the superior features of conventional "Epon" resin esters and are the result of a research program at Shell laboratories to develop "Epon" ester paint for architectural use.

It was pointed out that both vehicles offer ease of preparation in any type of resin cooking equipment, more complete freedom from odor than is obtainable with conventional "odorless" vehicles, excellent working properties, leveling, nonpenetration and durability, and costs substantially below those of commercial-type solvent vehicles. They are said to be particularly well adapted to the needs of the small paint manufacturer with limited facilities. The "low odor" vehicle, having the higher "Epon" resin content, will be used for its scrub resistance, non-penetration and holdout, and shorter cooking time, Shell said, while the "odorless" vehicle, having higher oil content, may be preferred because of its almost complete lack of odor and somewhat lower raw material cost.

Nuclear Energy Survey By Kaiser Unit Approved

A proposal by the Kaiser Engineers Division of Henry J. Kaiser Company, Oakland, Calif., to study the feasibility of nuclear power reactors has been approved by the Atomic Energy Commission. The Kaiser study is the eighteenth authorized under the commission's industrial participation program.

Kaiser Engineers will survey technology already developed in the power reactor field to determine the engineering and economic practicability of designing, constructing and operating a power-producing reactor. The company also will examine the technical problems related to building such reactors in the next few years and determine what research and development will be necessary before actually undertaking construction of a reactor. The company will spend an estimated $100,000 on the study. The AEC will make available to the company the reactor technology already developed and will provide consultation services of its personnel and of contractor personnel as required.

Vitro Elects Townsend

Morris M. Townsend has been elected a director of Vitro Corporation of America. Mr. Townsend, a financial executive and adviser of long experience, is executive vice-president of Axe Securities Corporation, and Axe-Houghton Mutual Investment Funds, New York. On the Vitro board he replaces William B. Paul, who resigned last month.

Humble Gets First Contract

—*Continued from page 3*

Oil Company, $19,242,000; Phillips Oil Company, $16,764,000; Syndicate (Sinclair Oil & Gas Company, Peoples Production Company, Standard Oil Company, El Paso Natural Gas Company, Western Natural Gas Company), $12,091,000; Syndicate (Atlantic Refining Company, Tide Water Associated Oil Company, Cities Production Corporation, Continental Oil Company), $7,859,500; Forest Oil Company, $6,100,000; Humble Oil & Refining Company, $5,632,400; Union Producing Company, $4,050,000; Placid Oil Company, $3,145,500; California Company, $1,227,250; Roy Lee, $1,121,000; Texas Company, $530,700; Magnolia Petroleum Company, $500,200; Standard Oil Company, $479,651; Stanolind Oil & Gas Company, $166,650; Superior Oil Company, $128,125; and Continental Oil Company, $101,000.

NPVLA Convention Report

—*Continued from page 70*

and assisting its dealers to merchandise color is, in my opinion, actually short-changing or blocking those dealers and itself from a substantial segment of their potential market."

Mr. Kolseth envisioned the possibility that if the paint industry were to gear a merchandising program to today's changing markets, a 40 percent increase in paint volume sales by 1965 could be expected.

Regional vice-presidents of the association are:—New England, Wilbur L. Rice, president of the Barreled Sunlight Paint Company, Providence, R.I.; eastern, J. V. Thompson, president of Thompson & Co., Oakmont, Pa.; central, G. R. Seidlitz, president of Seidlitz Paint & Varnish Company, Kansas City, Mo.

Southwestern, R. W. Blair, jr., president, Jones-Blair Paint Company, Dallas, Tex.; western, John W. Vaughn, president, Sillers Paint & Varnish Company, Los Angeles; divisional vice-president of wholesale-distributors division, H. V. Weatherford, vice-president, Harwood Brothers, Inc., Richmond, Va.

Elected to three-year terms on the executive committee are:—James Beckett, executive vice-president of Interchemical Corporation, New York; Lucius D. Clay, chairman of Continental Can Company, New York; S. U. Greenberg, general manager, Sears, Roebuck & Co. paint factories, Chicago.

Also, Bernhard Mautz, president of the Mautz Paint & Varnish Company, Madison, Wis.; E. S. Nickerson, fabrics and finishes department general manager, E. I. duPont de Nemours & Co., Wilmington, Del.; W. M. Stuart, president, Martin-Senour Company, Chicago, and J. A. Hager, Grand Rapids Varnish Corporation, Grand Rapids, Mich., who succeeds A. H. Gibson, who has resigned.

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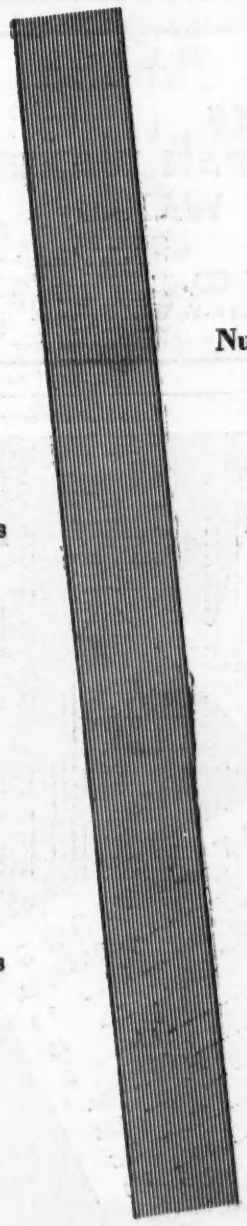

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The principal reactions of these alkyl titanium esters are hydrolysis and ester interchange. As molecular weight increases from the lowest to the highest of the series, rate of hydrolysis and ester interchange reactivity decrease. The last two—the hexyl and octyl compounds—show markedly greater stability than the butyl and isopropyl members.

This series affords the researcher a choice of alkyl titanium ester on the basis of reactivity desired for a given research application. The higher members should be attractive for ester interchange reactions in which the released higher alcohol better meets the solvent conditions for the system being modified.

Each of these five esters is being made on a pilot scale in experimental quantities only.

If you have any problems or ideas in which you think these compounds may be applicable, write on your business letterhead to Titanium Pigment Corporation, Dept. WA, 111 Broadway, New York 6, N. Y.

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Oils, Fats and Waxes

Feature of the edible oil group last week was the active trading in crude soybean oil for refiners account, the market closing fractionally higher with the advance in beans. Demand for cottonseed oil was fair at unchanged prices, while corn and peanut oils were easier dropping fractionally.

Lard was weak, declining sharply due to heavy hog receipts. Oleo stearine also was lower, while other animal oils were without change. Crude coconut oil was steady and fractionally higher, while copra shipments were lower.

Buying interest in tallow and greases slackened considerably for domestic and export account. Market was irregular at the recent price reduction. Exporters lowered bids. Domestic trading was limited. Soapers showed fair interest in replacements at slightly less than asking prices. Choice white grease was lower, while other grades were unchanged. Palm oil was slightly higher, with increased cost of replacements, while palm kernel was off fractionally.

Further price decline took place in tung oil, the market reflecting liberal arrivals from the Argentine and inactive trading. Oiticica was quiet and held at current levels. Trading in linseed oil was confined to small lots for actual needs. Prices were unchanged and steady, with higher flaxseed. Rapeseed oil was easier for prompt delivery and fractionally lower while futures were unchanged. Refined fish oil was well held at prevailing quotations. Crude menhaden oil was unavailable and quotations were merely nominal.

Soybean meal was firmer with the advance in beans and advanced $2 per ton. Cottonseed meal also was higher up $3 per ton. Peanut meal was scarce and small lots were sold at premiums. Linseed meal was absorbed in good volume against former orders, while new buying lagged.

There was no improvement in the spotty demand for vegetable waxes. Beeswax was steady with crude. Carnauba was unchanged, except No. 1 yellow Parnahyba. Japan wax was still unavailable on spot as arrivals of replacements were overdue. Refined ouricury was in short supply and firmly held.

Vegetable Oils

Castor—Trading in domestic oil was confined to immediate needs. All grades were maintained at current levels. Brazilian No. 1 was quoted at 15c. per pound, tankcars, New York, prompt delivery. The Indian government has announced further releases of castor oil for export by established shippers. Export allotments will be made for quantities equal of 50 percent made to established shippers during the period July to October 1954, subject to a minimum of 5 tons for shipment up to the end of next January.

Coconut—Crude was steadier and fractionally higher. Tankcars were offered at 12¼c. per pound, f.o.b. Pacific coast, prompt and later delivery. The New York market was quiet, with tankcars quoted at 13¼c. per pound, prompt delivery.

Corn—This market was weak and lower. Crude was sold at 13¼c. per pound, tankcars, f.o.b. mills, off 3⁄8c. per pound. Refined also was lower and quoted at 16½c. per pound, tankcars, New York, prompt. Trading was spotty.

Cottonseed — Stronger soybeans stiffened bleachable cottonseed oil futures last week, and early losses were regained, the market closing slightly higher. Crude cottonseed oil also was firmer, with bids raised fractionally. Trading in futures was mixed, with market following the fluctuations in allied markets. Hedging was light, with trade interests transferring hedges from nearby to deferred positions. Cash demand was moderate. Refined salad was unchanged at 16¼c. per pound, tankcars, New York, prompt delivery. Lard declined sharply due to heavy hog receipts, but had little effect on oil.

Crude cottonseed oil was steadier. Tankcars were bid 12¾c. per pound, f.o.b. mills in the southeast; 12½c. bid, Valley and 12⅜c. to 12¼c, Texas, as to location.

Sales of about 75 tankcars of crude cottonseed oil for export at 10.62c. to 10.65c. per pound by the government were unofficially reported. To date total sales of 1954 crude were estimated at about 475 tankcars.

CCC reported export sales of 22,968 long tons of prime summer yellow cottonseed oil at 10.84c. per pound, f.o.b., last week. This is equivalent to 858 tankcars out of offerings of 25,000 tons.

Sales and prices of prime summer yellow cottonseed oil futures in tankcars (60,000 pounds) on the N. Y. Produce Exchange for the week ended November 19 follow:—

	Sales	Cents per pound High	Low	Close
December	63	14.85	14.70	14.82S
March	40	14.88	14.71	14.85S
May	85	14.90	14.75	14.90S
July	39	14.84	14.66	14.82@14.87

Total sales, 227 contracts.

Memphis.—Crude cottonseed was bid 12½c. per pound, tankcars, f.o.b. mills, Valley and crude soybean oil 12c. bid, Decatur. Market tone good. Light trading. Cottonseed meal higher due to heavy trading for export. Meal was advanced to $73 per ton, sacked, Memphis. Cottonseed hulls, $20, per ton, sacked, same basis.

Linseed—Consuming demand was restricted to immediate delivery. While volume of new business was limited, the market remained steady, with higher flaxseed. Raw oil was unchanged at 13½c. per pound, tankcars, Minneapolis, November delivery and 12½c. for December-March. Withdrawals of oil against former contracts continued active.

Department of Agriculture last week offered 25,000,000 pounds of raw linseed oil for export on a competitive bid basis. Bids must be made in accordance with announcement CT-OP-4, and will be considered basis f.o.b. buyer's vessel, New York; also oil for further refining by domestic processors prior to export, basis in-store storage locations. Bids must be submitted to the Cincinnati Commodity Office, 1010 Broadway, Cincinnati, O., not later than 2 P.M., November 29.

Minneapolis.—With majority of the paint trade attending the annual convention of the National Paint, Varnish & Lacquer association in Chicago, there was not much doing on linseed oil the past week. Crushers said interest was very light, with only a few small lots of replenishments racked up. Prices held steady. Raw oil in tankcars was quoted at 13½c. for balance of November, f.o.b., Minneapolis; 12.5c. for December forward. Shipments were steady.

Shipments in linseed oil, in pounds, were as follows:—

	1954-55	1953-54
Past week	7,080,000	8,280,000
Since Sept. 1.....	89,120,000	79,800,000

Flaxseed—Market steady and higher. Trading light.

Minneapolis.—Flaxseed crushers advanced their bids back to $3.40 a bushel when they discovered the 5c.-per-bushel slash dried up offers from the country. The market was rather anemic at the $3.35 level but it perked up when bids were boosted. Purchases in the spot cash market amounted to only 9 cars. To-arrive bookings totaled 31 cars and 46,000 bushels in truck lots. Receipts of flaxseed for all accounts amounted to 257 cars are against 410 cars the previous week and 414 cars in the like week last year. Shipments totaled 191 cars, compared to 109 cars the preceding week and 52 cars a year ago.

Receipts and shipments of flaxseed, in bushels, were as follows:—

	Receipts 1954-55	Receipts 1953-54	Shipments 1954-55	Shipments 1953-54
Past week.	486,500	402,500	336,000	137,000
Since Sept. 1..	15,041,000	10,043,350	3,339,000	1,929,400

Oiticica—Market was quiet, but steady. Refined was maintained at 15¼c. to 15½c. per pound, tankcars, New York, prompt delivery, as to seller. Drums were without change, ranging from 16¾c. to 17½c. per pound, according to quantity.

Olive—Firmness prevailed in the local

Price Trends

Advanced

Cottonseed meal, $3 per ton.
Oil, coconut, crude, ½c. per lb.
Palm, 1/10c. per lb.
Soybean, crude, ⅜c. per lb.
refd., ⅜c. per lb.
Peanut meal, $4 per ton.
Soybean meal, $2 per ton.

Reduced

Cocoa butter, 5c. per lb.
Copra, $5 per ton.
Grease, choice white, ¼c. per lb.
Lard, cash, 2¼c. per lb.
Oil, corn, crude, ⅜c. per lb.
refd., ⅜c. per lb.
Palm kernel, ¼c. per lb.
Peanut, crude, ¼c. per lb.
refd., ¼c. per lb.
Rapeseed, ¼c. per lb.
Tung, ¾c. per lb.
Oleo stearine, ½c. to 1c. per lb.
Wax, carnauba No. 1, Parnahyba, 1c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 20, 1953
109.74	106.95	104.72	94.84

(*For Current Prices see page 9*)

For Late Market Developments, See Page 4

market, reflecting the strength of primary markets. Offers for replacement were higher. Trading on spot was moderate. Limited stocks were well held at $2.35 to $2.45 per gallon, drums, duty paid, according to quantity. Tunisian was unchanged at $2.20 to $2.25 per gallon, drums, same basis.

Palm—Stocks on spot were slightly higher, due to the increased cost of replacements. Drums were quoted at 12½c. to 12¾c. per pound, on spot and tankcars at 11¼c. per pound, prompt delivery.

Palm Kernel—Market was quiet and lower. Denatured oil was quoted at 12½c. per pound, tankcars, New York, prompt delivery.

Peanut—Crude was lower, with light sales at 20¾c. per pound, tankcars, f.o.b. mills. Offers were scarce. Refined was more or less nominal at 24½c. per pound, tankcars, New York delivery.

Rapeseed—Offers for spot delivery were freer and available at ¼c. less. Tankcars were reduced to 17¼c. per pound, New York for prompt delivery. December forward was quoted at 16¾c., same basis.

Soybean—Active trading in crude combined with higher soybeans stiffened this market and advanced prices sharply. Crude was sold up to 12⅛c. per pound, tankcars, Decatur, for November delivery; 12c., first week December; 11⅞c. first half December; 11¾c., second half December and 11⅜c., January-March, same basis. Refined grades also were higher with salad oil up to 14⅞c., per pound, tankcars, New York, prompt delivery.

Soybeans crop was forecast as of November 1 at 337,990,000 bushels, compared with 331,271,000 bushels, a month ago and final 1953 production of 262,341,000, bushels. The 10-year average was 230,649,000 bushels. Yield per acre was estimated at 19.5 bushels against 19.1, October; 18.3 a year ago and 19.9, 10-year average.

Sales and prices of crude soybean oil futures on the N. Y. Produce Exchange in tankcars (60,000 pounds) for the week ended November 19 follow:—

	Sales	Cents per pound—High	Low	Close
December	7	11.65	11.30	11.52@11.58
March	7	11.25	11.17	11.25@11.29
May	20	11.32	11.17	11.22@11.27
July	1	11.13	11.13	11.12@11.17
September	2	11.05	11.05	10.93@11.00

Total sales, 37 contracts.

Tung—Liberal offerings and quiet demand further weakened this market. Quotations dropped ¾c. per pound. Lower prices did not improved business. Tankcars were offered at 21¼c. per pound, New York, prompt delivery, with the possibility of doing ⅛c. less on a firm bid. January-March delivery was quoted at 21c. per pound, same basis. Drums were lower, ranging from 22¾c. to 23¼c. per pound, according to quantity.

Los Angeles Vegetable Oil Market

Los Angeles.—Little activity was noted in edible oils with fractional decreases for the majority of items. Coconut oil was very slow with quotations nominal at 12¼c. per pound, tankcars.

Following were ruling prices, f.o.b. Los Angeles, tankcar basis, unless otherwise designated:—

Castor, No. 1, 21c. per pound, l.c.l., drums included; No. 3, 20¾c. per pound, same basis; dehydrated, bodies, 25.6c. per pound, same basis; dehydrated, unbodied, 24.1c. per pound, same basis. Coconut, crude, 12¼c. per pound, nominal. Corn, crude, 13c. per pound; refined, 17½c. per pound. Cottonseed, crude, 13½c. per pound, California material, nominal; 12¼c. per pound, f.o.b. Texas; refined, 16¼c. per pound. Linseed—14.8c. per pound, November; 13.8c. December-March. Peanut, crude, 20¾c. per pound, f.o.b. mill, Southwest; refined, 24¾c. per pound, tankcars, f.o.b. Los Angeles. Soybean, crude, 12⅛c. per pound; refined, 15¼c. per pound. Tung, 21¼c. per pound, nominal, f.o.b. New York.

Miscellaneous

Castor Beans—Offers were scarce and market was entirely nominal at $100 per ton, f.o.b. Brazilian ports.

Imports of castor beans and castor oil at New York and Philadelphia last week were as follows:—

	Pounds—Beans	Oil
Last week	736,250	1,278,000
Previous week	123,450	1,194,000
Corresponding week, 1953	58,050	226,000
Total this year	92,731,100	111,514,360
Corresponding period, 1953	99,669,600	107,416,900

Cocoa Butter—Market continued weak, with lower beans, and was nominal at 87c. per pound, spot delivery.

Copra—Trading was slow. Shipments were easy and nominal at $165 per ton, c.i.f. Pacific coast.

Fats and Greases

Greases—Buying interest was slow for domestic and export delivery. Market was irregular and quotably unchanged, except choice white grease which was off ¼c. per pound. All hog was quoted at 9¾c. per pound, tankcars, delivered; not all hog 8½c.; yellow, 6¾c.; house, 6½c. and brown, 5⅞c., same basis.

Lard — Market was weak, declining sharply, primarily due to heavy hog receipts. Cash lard was lower at 14⅜c. per pound, drums, Chicago.

Oleo Oil—Demand was confined to small lots. Prices were unchanged at 19c. to 19½c. per pound, drums, as to quantity. Oleo stearine was unsettled and lower at 14c. to 14½c. per pound, as to quantity.

Tallow—Trading slackened considerably both for domestic and export account. Prices were unchanged at the recent decline. Light sales of bleachable fancy were reported at 7¾c. per pound, tankcars, delivered to dealers, with soapers ideas at ⅛c. less. Export sales also were limited. Guaranteed fancy was sold at 8¾c. per pound, drums, and 8⅜c., tankcars, f.a.s. Extra was quoted at 7½c. per pound, tankcars, delivered; special, 7¼c.; No. 1, 6¾c. and edible 14c.

Fish Oils

Cod—Consumers limited demand to an occasional small lot for prompt shipment. Light trading was reported in tanked oil at 8⅝c. per pound, drums, exdock. Stocks on spot were unchanged at 9¼c. to 9½c. per pound, drums, as to quantity.

Refined—Moderate trading was noted for drum lots at unchanged prices, chiefly for prompt delivery. Light pressed oil was quoted at 11c. per pound, tankcars, New York basis. The crude menhaden oil market was a nominal affair, as offerings are nil. Production was reported light off the Carolinas. Tankcars were merely nominal at 8c. per pound, works, Atlantic coast and 8¼c., f.a.s. Gulf ports.

Production of crude menhaden oil in September amounted to 3,249,610 gallons bringing the total up to 14,992,900 gallons during the first nine months of this year compared with 14,843,705 gallons for the same period last year. Sardine oil output totaled 3,879 gallons, in September, against none in August and 80 gallons during September last year.

Los Angeles.—Supplies of crude tuna oil remained moderate with sales reported at 5½c. per pound, tankcar basis, f.o.b. San Diego. Two cars of sardine oil traded at 8c. per pound, tankcar basis, f.o.b. San Pedro. Sardine landing receipts in the Southern California area continued to hold up with 32,071 tons reported through November 15 as compared to 1,884 tons for the same period last season. Canadian herring oil offered 8¼c. per pound, tankcars, f.o.b. Vancouver, Canadian Funds; no trading reported with interest lagging.

Fatty Acids

Conditions in this market remained firm and all grades were maintained at the recent prices advances. Withdrawals against contracts continued to move in steady volume. Animal fatty acids were not affected by the drop in tallow and greases. Oleic stearic and tallow acids remained steady. Vegetable acids also were maintained at higher prices which became effective the previous week.

Cake and Meal

Cottonseed Meal—Demand for meal continued restricted to local delivery as shipments out of the producing area have dropped considerably. Some export interest developed during the last few days but was not sufficient to cause much concern in the market. The export buying was principally out of the Memphis area to be shipped to New Orleans. Meal, forty-one

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percent was held at $73 per ton sacked Memphis; $75 Alabama; $76 Georgia and $77 South Carolina mills November shipment.

Department of Agriculture last week announced that limited quantities of cottonseed meal acquired by CCC will be offered for sale on a competitive bid basis, through the New Orleans Commodity Office, which will issue schedules indicating quantities and locations of meal. Detailed information may be obtained from Commodity Stabilization Service Office, 120 Marais St., New Orleans 16, La.

Linseed Meal—Resale offerings unsettled the market. Trading slow.

Minneapolis.—Offering of resale meal unsettled the linseed meal market the past week and some prices were shaded, especially if the orders were accompanied by shipping directions. Crushers maintained the price on extracted meal at $65 a ton, bulk, in carlots, f.o.b. Minneapolis but some stuff moved 50c. a ton or more under that level. Expeller meal held nominally unchanged at $70 a ton, bulk. Shipments continued heavy.

Shipments of linseed meal, in pounds, were as follows:—

	1954-55	1953-54
Past week	15,180,000	21,600,000
Since Sept. 1	163,920,000	149,620,000

Peanut Feed Meal—Small quantities of peanut meal remain in the southeast and the last sales were reported at $84 per ton sacked, f.o.b. Georgia mills for November shipment. There is hardly enough meal in the southeast to establish a market. Most users have removed it from formulas.

Soybean Meal—Demand for soybean meal lagged for domestic needs although export business seemed to take some of the slack out of the market. Considerable production of southeastern meal in the Mississippi Valley supplied a large area of the South. Mixed feed business in general was fair, keeping buyers on more or less on a hand-to-mouth basis. Meal, forty-four percent was offered at $68 per ton, bulk for November, $68 December, $68.50 January-March, $70 January-September, basis Decatur. Meal was available at $69 per ton bulk, f.o.b. points in the Mississippi Valley for November-December.

Waxes

Beeswax—Consuming demand continued restricted to actual requirements. Market was unchanged and fairly steady. African crude was quoted at 55c. to 56c. per pound, spot. Refined grades also were maintained at former levels.

Carnauba—Business was light and spotty, chiefly for immediate delivery. Quotations were without change except Parnahyba No. 1 yellow, which ranged from $1.10 to $1.12 per pound, spot as to seller. No. 1 Ceara was unchanged at $1.03 to $1.05 per pound, same basis. No. 3 crude Ceara was held at 70c. to 72c. per pound and Parnahyba, 74c. to 76c. per pound, as to quantity.

Japan—Stocks here have been cleaned up and the market was merely nominal at 50c. per pound, spot.

Ouricury—Limited stocks on spot was firmly held at 95c. to $1 per pound, depending upon quantity and quality. Demand was confined to immediate needs.

Ziegler Names Sales Agent

G. S. Ziegler & Co., New York, has appointed Drew, Brown, Ltd., Montreal and Toronto, sole sales representatives in Canada. Ziegler specializes in the compounding or rerunning of fatty acid pitches for use as extenders and replacements for higher price oils. The company also mines and supplies Gilsonite, owning extensive properties in Utah. Drew, Brown, Ltd., will also handle the sale of waxes.

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3—3' x 50' Rotary D. H. Dryers or Coolers.
4—Sperry 18" x 18" iron recessed Filter Presses, 18 chambers.
1—50 gal. stainless 347 Calandria Still, agitated, sight glasses, with condenser.
1—50 gal. stainless 347 agitated Tank, M.D.
8—Sperry Iron 36x36 recessed Filter Presses, 100 chambers, 2" cake, hydr. closure.
2—Link-Belt Co. ROTARY DRYERS. Roto-Louvre #502-16, Type C, 5'2" dia. 16' long, with #304 S/S contact parts. #207-10, 2'7" dia. x 10' long, carbon steel construction, and all auxiliaries.
1—Day Imperial Jacketed Mixer, 75 gal.
3—Anco 4 x 9' Chilling Rolls.
8—#12 Sweetland Pressure FILTERS, 48 leaves on 3" c/c. Leaves are bottom drainage, grooved rim, bronze with AU monel covering. Cap. each 642 sq. ft. filtering area. Excellent condition.
8—Colton 5½ single punch Tablet Machines, M.D.

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2—Blaw Knox 800 gal. 347 S.S. agitated Reactors, ASME, U-69, 100 PSI.
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1—Bird 40" Suspended Centrifugal S.S. Perforated Basket.
1—Bird 40" Suspended Centrifugal, rubber covered, Imperforate Basket.
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1—Niagara #110-20 Filter with 12 S.S. leaves.
1—Niagara type Horizontal Filter with 15—48" dia. S.S. leaves, 375 sq. ft.
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2—#3 Sweetland S.S. Filters with 12—25" dia. leaves, 75 sq. ft.
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3—Struthers-Wells 5'x15' nickel Rotary Vac Dryers.
1—Devine 2'x4' Vacuum Drum Dryer, 316 S.S.
1—Stokes #138J Vacuum Shelf Dryer having 9—44"x40" shelves.
1—Devine double door Vacuum Shelf Dryer having 17—59"x78" shelves.
2—Stokes Rotary Vacuum Dryers 3'x15' and 30"x8'.
3—Link Belt Roto-Louvre Dryers 7'5"x20', 3'10"x16' S.S., 2'7"x10' steel.
2—Lee 6'x6' S.S. agitated Tanks.
1—13,000 gal. Horizontal Propane Pressure Tank, ASME, 225# W.P.
1—Eureka #3 Porcelain Jar Mill 14.7 gals.
4—Mikro Pulverizers #2TH, #1SH, #1SI, and Bantam.
2—Hardinge 6'x22", 4½'x16" Conical steel lined Mills.
3—Orville Simpson Rotex Sifters 40"x84", 20"x81", 20"x48" double and triple deck.
3—Nash Vacuum Pumps #H8, #H7, #H6.
1—National 10"x20" two roll Mill with 25 HP motor.
4—Stokes DDS2, DD2, D4 and D3 Rotary Tablet Machines.

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1—Stainless Steel Powder Mixer, 425 cu. ft.

1—Pneu-Vac. 13" St. St. Dust Collector.

1—Niagara Filter #95-36, 80 sq. ft. st. st. leaves.

5—Pebble Mills—72" x 96", 60" x 72", 31" x 31".

1—Kent 6" x 14" High Speed 3-Roll Mill.

1—Rotex Screen 5' x 7', single deck.

2—W & P 100 gal. Sigma Blade Jacketed Mixers.

2—Contin. Ball Mills, Steel, 6' x 16' & 3' x 6'.

1—8800 gal. Horiz. Welded Steel Pressure or Vacuum Cooker, Agit., ASME.

1—6000 gal. Horiz. Aluminum Tank, Unused.

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2—T316 St. St. Shell & Tube Heat Exchangers, 785 sq. ft. ea.

5—Steel Shell & Tube Condensers, 1200 sq. ft. unused.

2—Charlotte #50 Colloid Mills.

1—Tolhurst Centerslung Centrifugal 36" bronze basket, lead covered curb.

1—Sharples 16P Pressurtite Centrifuge, St. St.

1—Oliver Precoat Rubber Lined Vacuum Filter 5'3" x 3', closed pressure housing.

2—Blaw-Knox ½ gal. Stainless Steel Autoclaves, 2000# Pr., agit.

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★ Robinson Unique Gyro Sifters; 20" x 69"; 20" x 86"; 40" x 60".
★ Stainless Steel 40 cu. ft. Double Ribbon Jacketed Mixer; 32" x 96".
★ Porter Type 316 S.S. 30 cu. ft. Ribbon Mixer.
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★ Sprout Waldron 283 cu. ft. Steel Ribbon Mixer; 5' x 10'.
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1—Alloy 100 gal. Monel jkt'd Reactor, w/drive, ASME.

1—Pfaudler Glass Lined Jacketed Vacuum Reactor, Series R, 500 gal. with impeller type agitator and drive.

1—Titusville 100 HP Package Boiler, 125 psi ASME, complete.

5—Aluminum Vertical Storage Tanks, 4000 gal. ea.

2—Feinc Type 316 Stainless Steel String Filters, 6'6" x 6', NEW.

1—Sparkler Model 33D9 Filter, stainless steel type 316, ASME, 60 psi—NEW.

1—Sperry 42" x 42" Aluminum Plate & Frame Filter Press with 35 chambers, 3" frames. NEW.

1—Eppenbach Q8V Stainless Steel Colloid Mill w/3 HP motor.

1—Fletcher 40" Stainless Steel suspended-type Centrifuge with perforated basket.

1—Lummus Steel Bubble Cap Column, 4' x 37' with 35 trays.

1—Colonial Iron Works Monel Bubble Cap Column, 2' x 5', with 5 trays.

1—Type 304 Stainless Steel Bubble Cap Column, 6' x 18' with 7 trays.

1—Badger 4' x 16' copper Column, 25 bubble cap trays.

1—Badger 5' x 23' copper Column, 20 bubble cap trays.

3—Buflovak Vacuum Shelf Dryer, 20 shelves, 42" x 42".

4—Alco Steel Heat Exchanger, 450 sq. ft. ea.

2—Colonial Iron Works Monel Heat Exchangers, 350 sq. ft. and 150 sq. ft.

1—Lummus Type 316 Stainless Steel Heat Exchanger, 360 sq. ft.

1—2' x 3' nickel jkt'd Ball Mill.

6—Simpson Intensive Mixers, #0, #1.

1—Day 150 gal. Stainless Steel Double Sigma Blade Mixer, complete.

1—Baker Perkins Double Arm Sigma Blade Jacketed Mixer with hydraulic tilting device, 100 gal.

2—Day 75 gal. Imperial Model 30 jkt'd double arm sigma blade Mixers.

1—Day 50 gal. stainless steel jkt'd double arm sigma blade Mixer.

1—Raymond 4' Double Whizzer w/10 HP motor.

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DRYERS—Rotary 3'x25', 5½x45', 6'x80'—

SCREENS—Tyler Hummer 3'x5' & 4'x5' single/triple deck—Rotex 20x48 single—Roball 40x120 double.

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1—Buflovak 24"x48" S.S. rotary vac. dryer.
1—Buflovak 24"x36" double drum dryer.
1—Buflovak 32x52".
1—Buflovak 48"x40" flaker.
1—Baker Perkins 500 gal. jacketed mixer.
1—Baker Perkins 100 gal. jacketed vac. mixer, model JNM.
4—Day double arm mixers, 20, 50, 75, 100 gals.
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Vacuum Pump sale. You can now obtain brand new, surplus Cenco Pressovac pumps at tremendous savings. Pressovac pump only (unmounted) $33.00 ea. Pressovac pump mounted on base, complete with belt, pulleys ¼ H.P. Westinghouse motor, $69.00. Lots of 5, less 5%. Lots of 10 less 10%. Ace Scientific Supply Co., PO Box 127, Linden, N.J. Phone ELizabeth 2-4823.

5-Carrier Atmospheric Truck Dryers, 8, 16 and 24 trucks; one Baker Perkins 200 gallon mixer, motor driven; two 26" Cage Mills each with two 15 H.P motors; one J. H. Day 1000# dry powder mixer. All set up in plant as last operated. Available immediate shipment. Priced attractively. Wolf-Perry Machinery Co., 293 Frelinghuysen Avenue, Newark, 5, New Jersey.

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Aluminum Tank—2,000 to 3,000 gallon capacity. Type 3 S or 3 SF preferred. Horizontal or vertical. For delivery in Brooklyn, New York. OPD 533.

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Interested hearing from concern who has facilities for processing raw material by solvent extraction, filtration and recovery of solvent for re-use. Tonnage basis. Would prefer location in New York metropolitan district or in East. OPD 534.

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POSITIONS OFFERED

Sales Corespondent wanted: Male. Excellent opportunity, large chemical house. Age 22-30, Salary $300 per mo. Experience preferred but not essential. OPD 536.

Drug Label Uniformity

—Continued from page 3

posals with opportunity for written comment or for public hearings. After the Food and Drug Administration is satisfied that there is adequate evidence of safety the choice of procedure would depend on whether any question has been raised in regard to safety.

Durham-Humphrey Requirements

The Durham-Humphrey amendment provides that the same drug may not bear the prescription limitation and be labeled with directions for lay use. Thus, a drug removed from the prescription-only category is not entitled under the law to bear the Rx legend. Under the regulation all manufacturers of the same drug will be required to make the label change at the same time, thus avoiding a situation in which the same drug is labeled by one manufacturer for over-the-counter sale, and another for prescription only.

The adoption of new labeling for a drug under these regulations may cause it to be a "new drug" until it has been extensively used according to that labeling.

Pesticide Situation in Mexico

—Continued from page 3

Recently the country started production of sulfur on a basis which will not only make it self-sufficient but provide a substantial quantity for export. Requirements of technical DDT and BHC heretofore have been imported, but the government laboratory is beginning to produce BHC on a modest scale and eventually production probably will be stepped up to take care of the country's needs.

Two US Concerns Weigh Projects

An American concern recently surveyed the possibilities for establishing a DDT plant in Mexico, and it appears likely the project will materialize, particularly if another US concern, in conjunction with a Mexican company, raises the domestic output of chlorine.

Certain pesticides, for which the market is too small to justify local production, will continue to be imported, but such items as DDT, BHC, and copper sulfate, within the next three or four years, probably will be in sufficient production to meet requirements. The pattern of imports is fast changing. In May, 1953, the government issued a decree placing insecticides under import control and since then the Ministry of Economy has denied licenses for all but a few relatively unimportant items.

APMA Meeting Hears

—Continued from page 7

ogy of Sloan-Kettering Institute for Cancer Research.

During the evening Dr. Vincent du Vigneaud, professor of biochemistry at Cornell University Medical School, will be presented with the APMA scientific award for 1954. He will receive the award during a dinner at the Starlight Ballroom.

Trade Policy Among Subjects

On the following day, during a morning session, Charles P. Taft, of the Committee for National Trade Policy, will speak on "Trade Policy," while Dr. Cary R. Wagner, president of the Synthetic Organic Chemical Manufacturers' Association, will speak on "The Third Side of the Tariff Issue." Dr. Charles E. Dutchess, New York pharmaceutical consultant, will speak on "Effects of Changing Therapeutics" and Dr. Lydia G. Giberson, of Metropolitan Life Insurance Company, will have as her topic "The Use of Psychiatry in Running a Business Organization."

During the afternoon session the speakers will include Mr. Larrick, whose topic will be, "The Food and Drug Administration"; Dr. James A. Shannon, associate director of the National Institutes of Health, who will speak on "Influence of Government Research on the Pharmaceutical Industry," and Rev. Hugh J. Halton, founder and director of the Aquinas Foundation, whose topic will be "Crisis in the West."

Odor Masks for Industrial Products Available from Standard Aromatics

Standard Aromatics, Inc., has introduced a series of aromatics masks and perfumes under the name "Maskaromes," designed to overcome unpleasant odors in many industrial products. The series comprises a group of fragrances in a price range of 33 to 75 cents per pound, and cover a range of odor characteristics that includes pine, rose and lilac.

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- Shriver 36" P&F Filter, 20 chambers, wash.
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- Sperry 24" Filter, bronze 32 rec plts.
- Bird 40" Centrifugal perf. basket, battery 2.
- Delaval Model ADVK 6 Centrifuge, 10 HP motor.
- Bird Cont Centrifuge, 36"x72", Stellite tip.
- Podbielniak Model 9000-S, S S Centrifuge.
- Feine 5'x4' S S Vacuum continuous Filter.
- Tyler single deck Model 100 Screen 18"x48".
- W&P Mixers, jacketed 38"x33"x28" (2).
- Diamond 2 Sigma Arm Mixers, 125 gal cap.
- Moore Ball Mills, 4'x5', 4x3', Ghd mtr.
- Baker-Perkins 20 cu ft double sigma Mixer.
- Fitzpatrick Model D Mill, 5 HP.
- J H Day 16"x40", 3 roll Paint Mill wtr cool.
- Devine Vac Shelf Dryer, 5 shelves, 38"x44".
- Devine Vac Shelf Dryer, 20 shelves, 40"x42".
- Simpson Size 0 Intensive Mixer, 1½ cu ft cap.
- Model B Stokeswrap, Complete (2).
- Std Knapp Model 429 top and bot, 6' comp.
- Separator 8' Raymond single whizzer 7½ HP.
- Pfaudler 300 gal S.S. Reactor S.S. Agit.
- 6000 Gal Inconel Pressure Tank with coil.
- 2500 Gal Inconel Pressure Tank with coil.
- 2—650 gal S.S. Tanks with agitators.
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ing men in the drug field outlined seven basic merchandising elements important to the operation of a successful prescription drug store. In addition to publishing these merchandising ideas, Mr. Bradshaw toured the country discussing them with groups of drug store owners. For approximately twenty years he directed advertising.

Walter S. Keutzer, newly-appointed western division sales manager, joined Mallinckrodt in 1910. In 1949 he was made assistant sales manager. Before this he was in charge of the sale of medicinal and hospital chemicals. During thirty-two years in the sales department at Mallinckrodt he spent approximately eighteen years as a sales representative in the middle west.

Prior to his appointment as assistant sales manager, Mr. Michener was manager of the western territory of the laboratory sales division, and was more recently temchemical sales division, and was more recently temporarily in charge of the Chicago regioual office. Mr. Michener joined the laboratory chemical sales division in 1946.

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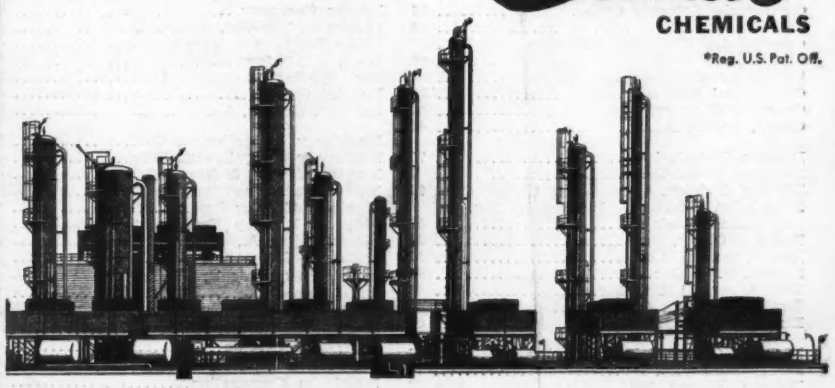

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